ARCADIS
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ARCADIS
6723 Towpath Road
P.O. Box 66
Syracuse
New York 13214-0066
Tel 315.446.9120
Fax 315.671.9450
www.arcadis-us.com

ENVIRONMENTAL

Mr. Payson Long
Remedial Bureau E
Section D
Division of Environmental Remediation
New York State Department of Environmental Conservation
625 Broadway, 12th Floor
Albany, NY 12233-7013

Subject:
McKesson Envirosystems
Bear Street Site
Syracuse, New York
Site No. 07-34-020

Date:
September 3, 2010

Contact:
David J. Ulm

Phone:
315.671.9210

Email:
david.ulm@
arcadis-us.com

Our ref:
B0026003.00190 #10

Dear Mr. Long:

This 2010 Biannual Process Control Monitoring Report (Biannual Report) for the McKesson Envirosystems, Bear Street Site (the Site), located at 400 Bear Street in Syracuse, New York, has been prepared by ARCADIS on behalf of McKesson Corporation. This report describes the operation and maintenance (O&M) activities conducted and the monitoring results obtained from January through June 2010. This report was prepared in accordance with the requirements of the New York State Department of Environmental Conservation- (NYSDEC-) approved Site Operation and Maintenance Plan (Site O&M Plan) (Blasland, Bouck & Lee, Inc. [BBL], Revised August 1999). It was also prepared in accordance with a December 29, 1999 letter from Mr. David Ulm (BBL), to Mr. Michael Ryan, P.E. (NYSDEC), which presented the long-term process control monitoring program as an addendum to the Site O&M Plan. The Site O&M Plan and the addendum are collectively referred to herein as the Site O&M Plan.

The Site is divided into three areas (Areas 1, 2, and 3), as shown on Figure 1. Additionally, the Site is divided vertically into two operable units (OUs): OU1 – Unsaturated Soil and OU2 – Saturated Soil and Groundwater. The NYSDEC-selected remedy for both OUs includes ongoing O&M activities. Since completing OU1 remedial activities in 1994/1995 and commencing OU2 in-situ anaerobic bioremediation treatment activities in July 1998, biannual reports have been submitted to NYSDEC, detailing both the O&M activities and the results of the process control monitoring program. A Site description and history, along with a description of completed remedial actions and ongoing O&M activities, are detailed in previous biannual reports, including the BBL August 2001 Biannual Report, which

documented remedial activities from July through December 2000. That information remains the same; therefore, it is not repeated herein.

As detailed in the Biannual Report submitted in June 2007, the OU2 in-situ anaerobic bioremediation treatment program was modified to an in-situ aerobic bioremediation treatment program in August 2006. Mr. Mark Mateunas (NYSDEC) verbally approved the modification in July 2006. From August 2006 to October 2008, the in-situ aerobic bioremediation treatment program consisted of amending the groundwater with an oxygen source (dilute hydrogen peroxide) and macronutrients. As detailed in the Biannual Report submitted in March 2009, the in-situ aerobic bioremediation treatment program was modified in October 2008 to provide a new and continuous source of oxygen to Areas 2 and 3; however, dilute hydrogen peroxide continues to be added to Area 1. At that time, macronutrient amendments were discontinued in Areas 1, 2, and 3. Mr. Gerald Rider (NYSDEC) verbally approved the modification in October 2008.

The Area 3 in-situ aerobic bioremediation treatment system operated satisfactorily during this reporting period. The hydraulic process control system functioned properly during the current reporting period (January through June 2010), and no substantial system repairs were required. Approximately 743,610 gallons of water were pumped from the withdrawal trench and introduced into the Area 3 infiltration trenches, as detailed herein. The information provided in this Biannual Report has been organized into the following sections:

- **I. In-situ Aerobic Bioremediation Treatment Program Activities** – Describes the in-situ aerobic bioremediation treatment program activities conducted from January through June 2010.
- **II. Hydraulic Process Control Monitoring** – Describes the results of the hydraulic process control monitoring activities conducted from January through June 2010.
- **III. Chemical of Concern Process Control and Biannual Groundwater Monitoring Program** – Describes the April 2010 results of the chemical of concern (COC) process control and Biannual Groundwater Monitoring Program, and provides a summary of the COC data obtained at the Site from 1988 through June 2010.
- **IV. Conclusions** – Provides conclusions based on the results of the process control monitoring activities.
- **V. Recommendations** – Provides recommendations for the in-situ aerobic bioremediation treatment program and monitoring activities.

I. In-situ Aerobic Bioremediation Treatment Program Activities

The in-situ aerobic bioremediation treatment program was verbally approved by NYSDEC in July 2006 as an alternate approach to lowering aniline and other COC concentrations (i.e., benzene, toluene, ethylbenzene, and xylene [BTEX], acetone, methanol, N,N-dimethylaniline, methylene chloride) at the three areas. This treatment program consists of introducing an oxygen source and macronutrients into Areas 1, 2, and 3. The oxygen source for all three areas between August 10, 2006 (beginning of the in-situ aerobic bioremediation treatment program) until October 27, 2008 (modifications of the in-situ aerobic bioremediation treatment program) was dilute hydrogen peroxide at a concentration of 200 parts per million (ppm); the macronutrients were added at an approximate carbon:nitrogen:phosphorus ratio of 50:25:10 in the form of Miracle-Gro®.

In October 2008, the in-situ aerobic bioremediation treatment program was modified to include an oxygen infusion system to provide a continuous source of oxygen gas to the groundwater in Areas 2 and 3 via iSOC® units. An oxygen diffuser (i.e., Oxygen Edge Unit) was also installed into the Area 3 equalization tank in January 2009. Dilute hydrogen peroxide amendments continue to be added to groundwater in Area 1, but macronutrient amendments were discontinued.

The following activities were conducted as part of the treatment program during this reporting period (see Figures 1, 2, and 3 for referenced locations).

- Added dilute hydrogen peroxide-amended groundwater into the infiltration trenches in Area 1 monthly.
- Added dilute hydrogen peroxide-amended groundwater into piezometers in Area 1 (PZ-S, PZ-G, PZ-Q, and PZ-R) and to well points in Area 1 (WP-4 and WP-5) monthly.
- Added oxygen gas to groundwater into infusion wells in Area 2 (IW-1, IW-2, IW-3, IW-4, and IW-5).
- Added oxygen gas to groundwater into infusion wells in Area 3 (IW-6, IW-7, IW-8, IW-9, IW-10, IW-11, IW-12, and IW-13).
- Added oxygen gas to groundwater in the Area 3 equalization tank.
- Measured dissolved oxygen (DO) levels in the field each month in Area 1 (MW-33), Area 2 (MW-36 and TW-02RR), and Area 3 (MW-27, MW-28, and MW-8SR).

Dilute hydrogen peroxide was added to the groundwater in Area 1 at a concentration of 200 ppm. Oxygen gas was continuously added to the Area 2 and 3 infusion wells resulting in a groundwater concentration of at least 40 ppm. Oxygen gas was continuously added to the Area 3 equalization tank at a concentration of approximately 25 ppm.

II. Hydraulic Process Control Monitoring

The hydraulic process control monitoring program was established in each of the three impacted areas to:

- Confirm that containment has been established in each area.
- Verify that the groundwater withdrawal rates in Area 3 do not cause the freshwater/saltwater interface to upcone to the bottom of the withdrawal trench.
- Verify that saturated soil/groundwater conditions within the shallow hydrogeologic unit are conducive to microbial degradation of the COCs by aerobic microbial populations.
- Optimize the system operation performance in Area 3.

As part of the hydraulic process control monitoring, groundwater level measurements were obtained at monitoring wells and piezometers that are screened entirely within the sand layer of the shallow hydrogeologic unit and located in and around each of the three areas. Groundwater level measurements were also obtained from selected deep monitoring wells (MW-3D, MW-6D, MW-9D, MW-11D, MW-18, MW-19, MW-23I, MW-24DR, and MW-25D). Additionally, a surface water level measurement was obtained from a staff gauge located in the Barge Canal adjacent to the Site. The hydraulic process control monitoring was conducted on April 26, 2010. The monitoring locations are shown on Figure 1. Mr. Payson Long (NYSDEC) was notified of the April 2010 hydraulic and COC monitoring event in the April 22, 2010 Biannual Process Control Monitoring Report for reporting period July through December 2009.

Table 1 summarizes the groundwater level measurements obtained during the April 26, 2010 hydraulic process control monitoring event, as well as those obtained since October 2006 (just after initiating the in-situ aerobic bioremediation treatment program). Table 2 in Attachment A summarizes the historical groundwater level measurements obtained from June 1998 (immediately prior to commencing the in-situ anaerobic bioremediation treatment activities) through June 2006 (prior to initiating the in-situ aerobic bioremediation treatment program). Figure 4 depicts the

potentiometric surface of the Site's shallow hydrogeologic unit using the April 2010 data set. Site-wide groundwater elevations for this round of sampling were consistent with elevations measured since the startup of the treatment system. The results and corresponding conclusions of the hydraulic process control monitoring are also summarized below.

- A closed-loop hydraulic cell continues to be maintained in Area 3, as shown on Figure 4.
- The groundwater withdrawal rate in Area 3 ranged from approximately 1.94 to 4.39 gallons per minute from January through June 2010.
- The withdrawal of groundwater continues to induce a hydraulic gradient in Area 3 from perimeter monitoring wells MW-23S, MW-25S, and MW-17R toward the withdrawal trench.
- In Area 3, approximately 25 percent of the recovered groundwater continued to be introduced to the secondary infiltration trench "B," and the remaining 75 percent continued to be introduced to the secondary infiltration trench "C" from January 1, 2010 to June 30, 2010.
- The hydraulic data that were obtained over the operating history of the treatment system in Area 3 to date have consistently indicated no discernable effect on the hydraulic gradient of the deep hydrogeologic unit.

The weekly conductivity measurements of groundwater pumped from the withdrawal trench in Area 3 ranged from approximately 1.74 to 2.21 millisiemens per centimeter (mS/cm), which is consistent with the range of the conductivity levels measured prior to system operation (1 to 4 mS/cm). These measurements are well below the measured conductivity of the deep unit, which is greater than the calibration range of the field instrument (10 mS/cm). These data indicate that the operation of the Area 3 treatment system has not caused the freshwater/saltwater interface to upcone to the base of the withdrawal trench. This lack of upconing is also an indicator that the hydraulic gradient of the deep hydrogeologic unit has not been significantly impacted by withdrawal of groundwater in Area 3.

III. Chemical of Concern Process Control and Biannual Groundwater Monitoring Program

The groundwater COCs for the Site are acetone, BTEX, methanol, trichloroethene, aniline, N, N-dimethylaniline, and methylene chloride. The COC process control and Biannual Groundwater Monitoring Program activities were conducted from April 26

through 30, 2010, in accordance with the Site O&M Plan. Groundwater samples were collected April 26 through 30, 2010. Due to the detection of methylene chloride at a concentration above the NYSDEC Groundwater Quality Standard (in four downgradient perimeter monitoring wells [PZ-4S, PZ-4D, MW-23I, MW-18]) during the April 2010 sampling event, these four wells were re-sampled and analyzed for methylene chloride on June 22, 2010. In addition, the following groundwater quality parameters were measured in the field during the April and June sampling events: temperature, conductivity, DO, and oxidation/reduction potential. The existing monitoring wells and piezometers used to conduct the long-term process control monitoring program and a schedule for implementing this program are provided in Table 2. The monitoring locations are shown on Figure 1.

As stated in the NYSDEC's 1997 Record of Decision (ROD) for the saturated soils at the Site, two of the remediation goals for the Site are to 1) "reduce, control, or eliminate the concentrations of COCs present within the saturated soils at the [Site]", and 2) "attain the NYSDEC Class GA Groundwater Quality Standards, to the extent practicable, for the COCs present in onsite groundwater."

In accordance with the requirements of the NYSDEC-approved monitoring program, laboratory analytical results for the April 2010 and June 2010 samples were validated. A summary of these validated COC groundwater analytical results is presented in Table 3 and shown on Figures 5 and 6. These figures and table also summarize the COC groundwater analytical results obtained during the biannual monitoring events conducted from September 2006 through June 2010, which collectively represent the results obtained since the start of the in-situ aerobic bioremediation treatment activities. The COC groundwater analytical results obtained prior to September 2006 are summarized on the Table 2 and Figures 1 through 4 in Attachment A. Copies of the validated analytical laboratory reports associated with the April 2010 and June 2010 sampling events are presented in Attachment B. A summary of the COC analytical results and DO measurements for the downgradient perimeter monitoring locations and for each of the three areas is presented herein.

During the April 2010 sampling event, the presence or absence of non-aqueous phase liquid (NAPL) was assessed in existing monitoring wells and piezometers based on observations made during the process control monitoring event. NAPL was not identified in any of the monitoring wells or piezometers used during the process control monitoring program.

Additionally, DO levels continued to be measured on a monthly basis at monitoring locations MW-8SR, MW-27, MW-28, MW-33, MW-36, and TW-02RR during this reporting period. Table 4 summarizes these DO measurements.

In addition, the Mann-Kendall Test for Trends was run for the COC data that has been obtained between March 1988 and June 2010 at the monitoring locations sampled as part of the COC process control and Biannual Groundwater Monitoring Program activities. The Mann-Kendall Test for Trends was also run for the DO data that has been obtained between August 2006 and June 2010 for monitoring locations MW-8SR, MW-27, MW-28, MW-33, MW-36, and TW-02RR.

The COC analytical results, DO measurements, and Mann-Kendall Test for Trends results, along with the downgradient perimeter monitoring locations for each area, are summarized below.

Upgradient Wells

- No COCs were detected at either upgradient well (MW-1 and MW-3S). No COCs have exceeded standards in MW-1 since March 2001 and in MW-3S since June 2005.

Area 1

- COC concentrations detected in groundwater samples collected from Area 1 monitoring wells during April 2010 were generally low, ranging from non-detect to concentrations just slightly greater than their respective NYSDEC Groundwater Quality Standard (Table 3 and Figure 5). A majority of COC concentrations detected during April 2010 at Area 1 monitoring wells were approximately equal to or below concentrations detected during the September 2009 sampling event.

- The N,N-dimethylaniline concentration at TW-01 decreased to the NYSDEC Groundwater Quality Standard (1.0 parts per billion [ppb]). No other COCs exceeded their NYSDEC Groundwater Quality Standard at TW-01 during this reporting period.

- Ethylbenzene, xylenes, and N,N-dimethylaniline at MW-9S were detected above their respective NYSDEC Groundwater Quality Standards in April 2010. Overall, the N,N-dimethylaniline concentration detected at this location are trending downward. Benzene decreased from 1.7 ppb in September 2009 to below the NYSDEC Groundwater Quality Standard (1 ppb) in April 2010 (0.86 ppb).

- Benzene and N,N-dimethylaniline at MW-31 were detected at concentrations above their respective NYSDEC Groundwater Quality Standards this reporting period. Overall benzene and N,N-dimethylaniline concentrations detected at this location are trending downward.

- Benzene and N,N-dimethylaniline at MW-33 were detected at concentrations above their respective NYSDEC Groundwater Quality Standard this reporting period. N,N-dimethylaniline was slightly greater than the NYSDEC Groundwater Quality Standard. The results of the Mann-Kendall Test for Trends show a decreasing trend in both N,N-dimethylaniline and benzene concentrations at MW-33. The aniline concentrations detected at MW-33 have remained below the NYSDEC Groundwater Quality Standard (5 ppb) for the last six sampling events. At the beginning of the aerobic bioremediation project in 2006, aniline was detected at 940 ppm and has not been detected at MW-33 since March 2008.

- All COCs concentrations at MW-32 are below NYSDEC Groundwater Quality Standards.

- During this reporting period, DO levels were measured at MW-33 from January to June 2010 and are summarized in Table 4. The DO levels ranged from 0.52 to 0.85 ppm. Aerobic conditions in groundwater are generally indicated when DO levels are greater than 2 ppm. Overall DO levels detected at MW-33 are trending upward.

Area 2

- COC concentrations detected in groundwater samples collected from Area 2 monitoring wells were generally low; most COC concentrations detected during April 2010 at Area 2 monitoring wells were approximately equal to or below concentrations detected during the September 2009 sampling event (Table 3 and Figure 5).

- The aniline concentration detected in the groundwater sample collected at TW-02RR was higher during this reporting period (2,800 ppb in April 2010) than the concentrations detected during the previous sampling period (1,600 ppb in September 2009). Benzene was the only other COC detected at a concentration above the NYSDEC Groundwater Quality Standard in the groundwater sample collected at this location during the April 2010 sampling event. The xylene concentration (4.2 ppb) at TW-02RR remained below the NYSDEC Groundwater Quality Standard (5 ppb) during this reporting period; this is the fourth result (non-detect in October 2003) below standard since initiating the in-situ bioremediation treatment system in 1998. Overall, the aniline, benzene, and xylene concentrations detected at this location are trending downward.

- Aniline was not detected at MW-34 above the NYSDEC Groundwater Quality Standard (5 ppb) this reporting period or last. Only N,N-dimethylaniline (2.4 ppb), which was detected at a concentration slightly greater than the NYSDEC

Groundwater Quality Standard, exceeded standards in the April 2010 sampling event at this location. Overall, the N,N-dimethylaniline concentrations detected at this location are trending downward.

- The aniline concentrations detected in the samples collected at MW-36 during the April 2010 sampling event (77 ppb) exceeded the NYSDEC Groundwater Quality Standard (5 ppb). Benzene (3.3 ppb), xylenes (5.4 ppb), and N,N-dimethylaniline (2.6 ppb) were detected at concentrations slightly greater than their respective NYSDEC Groundwater Quality Standard in the April 2010 sampling event at this location. The concentrations of N,N-dimethlyaniline detected at MW-36 are trending downward.

- No COCs were detected at MW-35. No COCs have exceeded the NYSDEC Groundwater Quality Standards in this well since November 2004.

- DO levels were measured in Area 2 (MW-36 and TW-02RR) between January 2010 and June 2010 and are summarized in Table 4. The DO levels ranged from 0.47 to 0.94 ppm at MW-36 and 0.47 to 0.73 ppm at TW-02RR. Aerobic conditions in groundwater are generally indicated when DO levels are greater than 2 ppm. Overall DO levels detected at MW-36 are trending upward.

Area 3

- COC concentrations detected in groundwater samples collected from Area 3 monitoring wells during the April 2010 sampling event were generally consistent with or lower than the concentrations detected in the previous sampling event conducted in September 2009 (Table 3 and Figure 6).

- Monitoring well MW-8SR is located in the center of Area 3 and within the area that has been identified as containing relatively higher concentrations of COCs (Figure 6). The aniline concentration detected at MW-8SR (370 ppb) in April 2010 was the lowest concentration detected at this location since initiating the remedial action. The aniline concentrations detected at MW-8SR have been trending downward since 2002. Although xylenes (41 ppb) were detected in April 2010 at a concentration above the NYSDEC Groundwater Quality Standard (5 ppb), it is the lowest concentration detected since initiating the aerobic bioremediation treatment program in August 2006. The toluene concentration detected in the groundwater sample collected at MW-8SR was lower during this reporting period (4.6 ppb in April 2010) than the concentrations detected during the previous sampling period (6.8 ppb in September 2009). The toluene concentration detected in April 2010 was below the NYSDEC Groundwater Quality Standard (5 ppb). All other COC concentrations, including xylenes , exceeding their respective NYSDEC

Groundwater Quality Standard in the groundwater sample collected from MW-8SR in April 2010 (i.e., benzene and ethylbenzene) are gradually trending downward.

- The aniline concentration detected at MW-27 during this reporting period (1,300 ppb in April 2010) was lower than the concentration detected during the previous reporting period (2,100 ppb in September 2009). Benzene (4.5 ppb) and xylene (10 ppb) were detected in the groundwater sample collected from MW-27 in April 2010 at concentrations lower than the respective concentrations detected in September 2009 (benzene, 6.2 ppb and xylenes, 23 ppb), but still exceeded their respective NYSDEC Groundwater Quality Standard. Ethylbenzene concentration was detected at 6.1 ppb, just slightly greater than the September 2009 concentration of 5.9 ppb. The toluene concentration detected at MW-27 decreased from 6.9 ppb in September 2009 to below the NYSDEC Groundwater Quality Standard (5 ppb) in April 2010 (2.4 ppb).

- Monitoring well MW-28 historically exhibited relatively higher concentrations of aniline. Aniline was not detected at MW-28 at a concentration above the NYSDEC Groundwater Quality Standard (5 ppb) during this reporting period. Benzene was detected at 2.8 ppb, just slightly greater than its NYSDEC Groundwater Quality Standard of 1 ppb. No other COCs were detected at concentrations above their respective Groundwater Quality Standard in groundwater samples collected from MW-28. Overall benzene and aniline concentrations detected at this location are trending downward.

- No COCs were detected at MW-29. No COCs have exceeded the NYSDEC Groundwater Quality Standards in this well since May 2003. Methanol has not been detected at this location since November 2004.

- The aniline concentration at MW-30 decreased from 21 ppb in September 2009 to non-detect this reporting period. No COCs were detected at MW-30.

- DO levels were measured at MW-8SR, MW-27, and MW-28 between January and June 2010 and are summarized in Table 4. The DO levels at MW-8SR ranged from 0.58 to 1.02 ppm. The DO levels at MW-27 ranged from 0.47 to 1.11 ppm. The DO levels at MW-28 ranged from 0.82 to 1.97 ppm. Aerobic conditions in groundwater are generally indicated when DO levels are greater than 2 ppm. Overall DO levels detected at MW-27 and MW-28 are trending upward.

Downgradient Perimeter Monitoring Locations

The April 2010 sampling revealed methylene chloride concentrations at four of the downgradient perimeter monitoring locations (PZ-4S, PZ-4D, MW-23I, and MW-18)

above the NYSDEC Groundwater Quality Standard (5 ppb) (Table 3 and Figure 6). These four monitoring locations were re-sampled on June 22, 2010 in accordance with the Site O&M Plan. Methylene chloride was not detected at concentrations above the NYSDEC Groundwater Quality Standards (5 ppb) at PZ-4S, PZ-4D, MW-23I, and MW-18 in June 2010. Because the June samples did not yield detectable concentrations of methylene chloride, and given the historical data from these wells, it is concluded that the methylene chloride detections in April 2010 are a result of sampling or laboratory contamination.

Other than the limited methylene chloride detections, no COCs were detected in MW-18, MW-19, MW-23I, MW-23S, MW-25S, MW-25D, PZ-4S, and PZ-4D. Benzene was detected in MW-17R at a concentration (0.22 ppb) below the NYSDEC Groundwater Quality Standard (1 ppb).

In many perimeter wells/piezometers, COCs have not exceeded NYSDEC Groundwater Quality Standards in at least 6 years. In MW-23I and PZ-4D, no COCs have exceeded the NYSDEC Groundwater Quality Standards, except the methylene chloride detection in April 2010. In MW-19, MW-23S, and PZ5D, no COCs have exceeded the NYSDEC Groundwater Quality Standards since October 2003. In MW-25S, no COCs have exceeded the NYSDEC Groundwater Quality Standards since June 1999. In MW-25D and PZ5S, no COCs have ever exceeded the NYSDEC Groundwater Quality Standards. Except for the methylene chloride exceedances in April 2010, no COCs have exceeded the NYSDEC Groundwater Quality Standards in MW-18 or PZ-4S since April 2002.

Methanol has never been detected at 10 out of the 13 perimeter wells. Of the three wells with historical methanol detections (MW-17R, MW-18, and MW-23S), the last detection was in November 2004. There is no NYSDEC Groundwater Quality Standard for methanol.

As stated in the NYSDEC's 1997 ROD for the saturated soils at the Site, one of the remediation goals for the Site is to "mitigate the potential for migration beyond the Site boundary of groundwater that contains concentrations of COCs in excess of their respective NYSDEC Class GA Groundwater Quality Standard." The data from the downgradient perimeter monitoring locations show that this goal is being achieved.

IV. Conclusions

The process control monitoring data presented in this Biannual Report will continue to be used to monitor the effectiveness of the in-situ aerobic bioremediation

treatment activities. The following conclusions are based on the process control monitoring data obtained to date.

- A closed-loop hydraulic cell continues to be maintained in Area 3.

- Operation of the Area 3 treatment system has not caused the freshwater/saltwater interface to upcone to the base of the withdrawal trench.

- COCs were not detected at concentrations above the NYSDEC Groundwater Quality Standards at most of the perimeter sampling locations in April 2010. Although methylene chloride was detected at a concentration above the NYSDEC Groundwater Quality Standards at four perimeter sampling locations in April 2010 (possibly due to lab contamination), methylene chloride was not detected at these monitoring wells during the June 2010 re-sampling event. These results provide another line of evidence that the groundwater in Area 3 is contained in the Area 3 treatment system. The closed-loop hydraulic cell in Area 3 supports this conclusion.

- COC concentrations detected in the groundwater samples collected from Area 1 demonstrate a decrease since the in-situ bioremediation treatment activities began in July 1998. COC concentrations have continued to remain low since the in-situ aerobic bioremediation treatment program began in August 2006. In April 2010, the COCs in this area were mostly non-detect or below their respective NYSDEC Groundwater Quality Standard, including aniline in groundwater at MW-33. These COC concentrations indicate that, for many years, Area 1 has met the NYSDEC Class GA Groundwater Quality Standards for toluene, trichloroethene, methylene chloride, and acetone, which is an objective of the Record of Decision (ROD). More recently, Area 1 has met the NYSDEC Class GA Groundwater Quality Standard for aniline in groundwater, and COC concentrations within saturated soils have been reduced, controlled, or eliminated, in accordance with ROD objectives. A few COCs (e.g., N,N-dimethylaniline, benzene, ethylbenzene, and xylene) continue to be present at concentrations greater than their respective NYSDEC Groundwater Quality Standards.

- In the downgradient edge of Area 1, aniline was not detected in the groundwater sample from MW-33 during the April 2010 sampling event. Aniline concentrations previously detected in MW-33 have remained below the NYSDEC Groundwater Quality Standard for the last six sampling events since November 2007, suggesting that the in-situ aerobic bioremediation treatment program facilitated the reduction of aniline.

- Based on the DO levels measured in Area 1, it does not appear that aerobic conditions (i.e., DO levels greater than 2 ppm) were maintained.

- Overall, the COC groundwater concentrations within Area 2 have decreased over the last nine sampling events since June 2006. The concentrations continue to be relatively low, excluding aniline detected at monitoring location TW-02RR in April 2010. The aniline concentrations detected at MW-36 have decreased since June 2007 and remain low. In addition, N,N-dimethylaniline concentrations remain relatively low at MW-34, and aniline was not detected at this location during April 2010 sampling event. Overall, the results indicate that the in-situ aerobic bioremediation treatment program is facilitating the reduction of aniline in Area 2. COC concentrations within saturated soils have been reduced, controlled, or eliminated. To the extent practicable, for many years Area 2 has met the NYSDEC Class GA Groundwater Quality Standards for acetone, toluene, ethylbenzene, methylene chloride, and trichloroethene, in accordance with ROD objectives.

- The continuous supply of oxygen to the groundwater in Area 2 appears to have reduced the rebound effect in the COC concentrations previously observed when oxygen was used up after periodic injections of hydrogen peroxide where introduced to the groundwater. Currently, the DO is constantly being supplied, so bioprocesses are continuously carried out instead of only when hydrogen peroxide is present. Based on the DO levels measured in Area 2, it does not appear that aerobic conditions (i.e., DO levels greater than 2 ppm) were maintained. The aniline and DO concentrations suggest that the oxygen is being utilized for the biodegradation processes soon after it is introduced to groundwater, resulting in little surplus of oxygen to increase the groundwater DO levels.

- The aniline concentration at MW-8SR in Area 3 has decreased approximately 99 percent between the end of the anaerobic bioremediation treatment program in June 2006 and the April 2010 sampling events. These results indicate that the in-situ aerobic bioremediation treatment program is facilitating the reduction of aniline in Area 3. Similar to the results in Area 2, the continuous supply of oxygen to the groundwater in Area 3 appears to have reduced the rebound affect in the COC concentrations. Since June 2006, the average concentrations of aniline detected in Area 3 (MW-8SR, MW-27, and MW-28) have fluctuated, but overall have declined by an order of magnitude. COC concentrations within saturated soils have been reduced, controlled, or eliminated, and to the extent practicable, for many years Area 3 has met the NYSDEC Class GA Groundwater Quality Standards for acetone, methylene chloride, and trichloroethene, in accordance with the ROD.

- Based on the DO levels measured in Area 3, it appears that aerobic conditions were not achieved; however, DO levels have increased since initiating the in-situ aerobic bioremediation treatment. Aerobic conditions in groundwater are generally indicated when DO levels are greater than 2 ppm. The aniline concentrations within Area 3 (i.e., MW-8SR, MW-27, and MW-28) have decreased overall between June 2006 and April 2010 suggesting that the in-situ aerobic bioremediation treatment program facilitated the reduction of aniline. The aniline and DO concentrations suggest that the oxygen is being utilized for the biodegradation processes soon after it is introduced to groundwater, resulting in little surplus of oxygen to increase the groundwater DO levels.

V. Recommendations

The in-situ aerobic bioremediation program generally has reduced the aniline and other COC concentrations at the Site, and it is recommended that an oxygen source continue to be introduced into Areas 1, 2, and 3. In addition, aniline concentrations are consistently non-detect in Area 1 and indicate that monthly dilute hydrogen peroxide amendments provided adequate oxygen for the continuation of aerobic degradation of aniline in Area 1; however, concentrations are now at levels that are likely to continue degrading through natural processes. It is recommended that the dilute hydrogen peroxide amendments be discontinued in Area 1, and the biannual monitoring continue to evaluate the effectiveness of the natural attenuation processes to continue the decrease of Site COCs to below NYSDEC Groundwater Quality Standards.

The monitoring results of the current in-situ aerobic bioremediation program indicate that a constant source of oxygen has supported the continued reduction of aniline concentrations in Areas 2 and 3 (i.e., TW-02RR, MW-27, and MW-8SR). Therefore, it is recommended that the oxygen infusion system installed in Areas 2 and 3 and the oxygen diffuser in the Area 3 equalization tank continue to be maintained, as well as maintaining the hydraulic modifications made to the Area 3 system. It is anticipated that the constant source of oxygen may result in reducing the rebound affect on the aniline concentrations and a faster treatment time than was observed with the dilute hydrogen peroxide amendments. Further recommendations on the oxygen infusion system and the hydraulics of the Area 3 system will be made based on the results of the next biannual hydraulic monitoring and sampling event and DO level readings.

The Biannual Groundwater Monitoring Program activities will continue at the Site (Table 3). The second biannual sampling event of 2010 is tentatively scheduled to be conducted during the week of September 13, 2010. In addition, it is recommended to continue measuring DO levels in the field at MW-33 in Area 1; MW-36 and TW-02RR

in Area 2; and MW-27, MW-28, and MW-8SR in Area 3 at a frequency of once per month. A proposal to modify the hydraulic and COC monitoring programs of the current Site O&M Plan will follow under separate cover.

The in-situ aerobic biodegradation treatment activities will continue to be conducted in accordance with the Site-specific Health and Safety Plan.

As discussed in this Biannual Report and summarized in Table 2, the monitoring activities conducted at the Site are included in the Biannual Groundwater Monitoring Program and the revised Process Control Monitoring Program. The activities included in the Biannual Groundwater Monitoring Program will continue, and will include the biannual collection of chemical and hydraulic data from downgradient perimeter wells/piezometers to determine whether groundwater that contains COC concentrations in excess of their respective NYSDEC Groundwater Quality Standard is migrating beyond the Site boundary.

As stated in the April 23, 2009 email from Mr. Long (NYSDEC) to Ms. Dawn Penniman (ARCADIS), the process to reclassify this Site from a Class 2 Inactive Hazardous Waste Disposal Site (i.e., significant threat to the public health or environment – action required) to a Class 4 Inactive Hazardous Waste Disposal Site (i.e., Site properly closed – requires continued management) has not been advanced since Mr. Rider emailed Ms. Penniman on January 5, 2009 with the status of the Site's reclassification process. It is recommended that advancement of the reclassification process continue.

If you have any questions or require additional information, please do not hesitate to contact me at 315.671.9210.

Sincerely,

ARCADIS

David J. Ulm
Senior Vice President

DEP/cmb
Attachments

Copies:
Mr. Gerald Rider, NYSDEC (w/out Attachment B)
Mr. Gregg Townsend, NYSDEC (w/out Attachment B)
Mr. Chris Mannes, NYSDEC (w/out Attachment B)
Mr. Richard Jones, NYSDOH (w/out Attachment B)
Ms. Jean Mescher, McKesson Corporation (w/out Attachment B)
Mr. Douglas Morrison, Bristol-Myers Squibb Company (w/out Attachment B)
Mr. Christopher Young, P.G., de maximis, inc. (w/out Attachment B)

ARCADIS

Tables

Table 1. Summary of Groundwater Monitoring Data, Aerobic Bioremediation Treatment Program, October 2006 through April 2010, 2010 Biannual Process Control Monitoring Report, McKesson Envirosystems, Former Bear Street Facility, Syracuse, New York

Location	Reference Elevation (feet AMSL)	10/30/06	6/6/07	11/12/07	3/24/08	8/25/08	3/23/09	9/14/09	4/26/10
Canal	393.39	364.29	362.99	362.06	364.34	363.21	363.54	362.89	362.97
Collection Sump	372.81	363.18	362.26	361.86	363.81	362.14	362.20	362.18	362.18
MW-3S	376.54	369.08	--	367.60	367.93	365.19	367.32	365.50	365.67
MW-3D	375.56	366.90	365.52	365.24	366.62	365.11	366.21	365.16	365.72
MW-6D	377.07	367.07	365.72	365.44	366.83	365.31	366.44	365.38	365.96
MW-9D	376.76*	366.91	365.83	365.56	366.87	365.35	366.48	365.42	366.03
MW-11D	373.68	366.53	--	364.92	366.32	364.85	365.91	364.89	365.43
MW-11S	373.50	366.11	364.27	363.88	365.69	363.86	364.88	363.89	364.42
MW-18	372.57	363.82	362.63	362.32	363.51	362.26	363.16	362.22	362.67
MW-19	376.00	364.09	362.93	362.61	363.84	362.43	363.42	362.46	362.98
MW-23I	372.77	366.43	365.02	364.74	366.12	364.64	365.69	364.67	365.19
MW-23S	372.61	365.28	362.98	362.56	364.81	362.62	363.50	362.63	362.99
MW-24DR	375.14	366.59	365.28	364.90	366.31	364.81	365.82	364.86	365.38
MW-24SR	375.55	366.49	365.21	364.83	366.26	364.73	365.81	364.79	365.32
MW-25D	373.67	366.64	365.30	364.95	366.35	364.85	365.88	364.94	365.44
MW-25S	373.39	365.26	363.32	362.87	364.84	362.88	363.97	362.89	363.34
PZ-4D	376.11	366.64	365.29	364.98	366.39	364.90	365.96	364.94	365.49
PZ-5D	375.58	366.87	365.49	365.19	366.69	365.09	366.21	365.14	365.01
PZ-9D	377.29	366.91	365.26	366.09	366.68	365.18	366.31	365.24	365.84
PZ-A	373.94	365.62	363.11	362.72	364.83	362.96	363.56	362.95	362.28
PZ-B	373.92	365.85	363.12	362.62	365.03	362.87	363.64	362.83	362.96
PZ-C	374.85	367.14	365.85	365.30	367.15	365.16	366.71	365.23	366.37
PZ-D	375.12	367.68	365.98	365.40	367.29	365.28	366.81	365.40	366.57
PZ-E	374.12	368.13	365.16	364.07	366.58	364.14	366.82	364.20	364.25
PZ-F	377.06	368.32	366.18	365.76	367.99	365.50	367.41	365.69	366.72
PZ-G	377.16	368.64	366.28	365.82	368.14	365.94	367.29	367.22	367.32
PZ-HR	376.99	368.31	366.23	365.74	368.00	365.48	367.41	365.63	366.65
PZ-I	375.15	369.00	366.49	365.92	368.55	365.50	367.97	365.71	367.04
PZ-J	374.89	367.96	366.16	365.82	367.69	365.55	367.20	365.70	366.55
PZ-K	373.19	365.58	363.36	362.91	364.96	363.08	363.80	363.04	363.33
PZ-L	374.62	365.23	362.94	362.63	364.64	362.79	363.39	362.80	363.80
PZ-M	374.35	365.60	363.54	363.11	365.13	363.30	364.00	363.31	363.62
PZ-N	376.94**	367.51	365.76	365.26	367.05	365.09	366.63	365.17	366.22
PZ-O	375.36	365.42	363.22	362.82	365.01	362.91	363.94	362.93	363.35
PZ-P	376.89	368.30	366.31	365.83	368.06	365.58	367.51	365.75	366.76
PZ-Q	377.61	368.61	366.33	365.83	368.23	365.57	367.61	365.77	366.78
PZ-R	377.05	368.51	366.19	365.79	368.20	365.55	367.57	365.73	366.74
PZ-S	378.13	372.48	366.51	365.81	368.21	365.55	367.60	365.74	366.76
PZ-T	376.25	368.04	366.24	365.84	367.89	365.52	367.37	365.66	366.63
PZ-U	375.35	367.99	366.07	365.80	367.75	365.52	367.25	365.66	366.52
PZ-V	375.78	367.97	366.17	365.78	367.78	365.48	367.24	365.64	366.52
PZ-W	375.78	367.79	366.01	365.69	367.59	365.46	367.10	365.60	366.47

Notes:

1. AMSL = above mean sea level (NGVD of 1929).
2. * = Monitoring well MW-9D inner polyvinyl chloride (PVC) pipe was reduced (cut) by 1½ inches on 9/19/01. The reference elevation prior to 9/19/01 was 376.88 feet AMSL. The new reference elevation for MW-9D is 376.76 feet AMSL.
3. ** = The reference elevation for PZ-N was 376.02 feet AMSL prior to 11/16/00. The new reference elevation is 376.94 feet AMSL.
4. -- = No groundwater level measurement was obtained.

Table 2. Revised Long-Term Hydraulic and COC Process Control Monitoring Schedule, 2010 Biannual Process Control Monitoring Report, McKesson Envirosystems, Former Bear Street Facility, Syracuse, New York

Monitoring Location	Annual Sampling Schedule	
	First Sampling Event	Second Sampling Event
Upgradient		
MW-1	C	C
MW-3S	C	C
MW-3D	H	H
Area 1		
TW-01	C	C
MW-6D	H	H
MW-9S	C	C
MW-9D	H	H
MW-31	C	C
MW-32	C	C
MW-33	C	C
PZ-F	H	H
PZ-G	H	H
PZ-HR	H	H
PZ-P	H	H
PZ-Q	H	H
PZ-R	H	H
PZ-S	H	H
Area 2		
TW-02RR	C	C
PZ-9D	H	H
MW-34	C	C
MW-35	C	C
MW-36	C	C
PZ-I	H	H
PZ-J	H	H
PZ-T	H	H
PZ-U	H	H
PZ-V	H	H
PZ-W	H	H
Area 3		
MW-8SR	C	C
MW-27	C	C
MW-28	C	C
MW-29	C	C
MW-30	C	C
PZ-A	H	H
PZ-B	H	H

Table 2. Revised Long-Term Hydraulic and COC Process Control Monitoring Schedule, 2010 Biannual Process Control Monitoring Report, McKesson Envirosystems, Former Bear Street Facility, Syracuse, New York

Monitoring Location	Annual Sampling Schedule	
	First Sampling Event	Second Sampling Event
Area 3 (Cont'd.)		
PZ-C	H	H
PZ-D	H	H
PZ-E	H	H
PZ-K	H	H
PZ-L	H	H
PZ-M	H	H
PZ-N	H	H
PZ-O	H	H
MW-11S	H	H
MW-11D	H	H
Downgradient Perimeter Monitoring Locations		
MW-17R	C	C
MW-18	C, H	C, H
MW-19	C, H	C, H
MW-23I	C, H	C, H
MW-23S	C, H	C, H
MW-24SR	H	C, H
MW-24DR	H	C, H
MW-25S	C, H	C, H
MW-25D	C, H	H
PZ-4S	C	NM
PZ-4D	C, H	H
PZ-5S	NM	C
PZ-5D	H	C, H

Notes:

1. H = Hydraulic monitoring (groundwater level measurements).
2. C = Monitoring for chemicals of concern (COCs).
3. NM = Not monitored.
4. The hydraulic monitoring identified in this table will be conducted on a semi-annual basis. The hydraulic monitoring also includes measuring the conductivity of groundwater recovered from Area 3 from a sampling port located before the equalization tank.
5. Field groundwater parameters including pH, temperature, conductivity, dissolved oxygen, and oxidation/reduction potential are measured during each COC sampling event.
6. Each of the monitoring wells and piezometers used for hydraulic and COC monitoring during the semi-annual monitoring event are checked for the presence (if any) of non-aqueous phase liquid.
7. Based on the results obtained, the scope and/or the frequency for the hydraulic and/or COC components of the long-term process control monitoring program, as detailed herein, may be modified. Any modifications would be made in consultation with the New York State Department of Environmental Conservation (NYSDEC).
8. This table is based on the NYSDEC-approved Operation and Maintenance Plan (Blasland, Bouck & Lee, Revised August 1999), including the NYSDEC-approved December 29, 1999 Addendum with the modifications detailed in the October 2004 Biannual Process Control Monitoring Report.

Table 3. Summary of Groundwater Monitoring Data, Aerobic Bioremediation Treatment Program, September 2006 through April 2010, 2010 Biannual Process Control Monitoring Report, McKesson Envirosystems, Former Bear Street Facility, Syracuse, New York

Monitoring Well	Sampling Date	Screen Elev. (feet AMSL) Top	Bottom	Acetone	Benzene	Toluene	Ethyl-benzene	Xylene[A]	Methanol	Trichloro-ethene	Aniline	N,N-Dimethyl-aniline	Methylene Chloride
NYSDEC Groundwater Quality Standards (TOGS 1.1.1)				50	1	5	5	5	NA	5	5	1	5
MW-1	11/06	370.3	355.3	<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<1.0	<1.0	<3.0
	6/07			<5	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.0	<1.0	<3.0
	11/07			<5.0	<1.0	<5.0	<4.0	<5.0	<500 J	<1.0	<5.0	<0.5	<3.0
	3/08			<5.0 J	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.0	<0.5	<3.0
	8/08			7.4	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.6	<0.6	<3.0
	3/09			<10	<1.0	<1.0	<1.0	<3.0	<500	<1.0	<5.0	<0.5	<1.0
	9/09			8.9 J	<1.0	<1.0	<1.0	<3.0	<500	<1.0	<5.0	<1.0	<1.0
	4/10			<10	<1.0	<1.0	<1.0	<3.0	<500	<1.0	<5.0	<1.0	<1.0
MW-3S	11/08	365.1	350.1	<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<1.0	<1.0	<3.0
	6/07			<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.0	<1.0	<3.0
	11/07			<5.0	<1.0	<5.0	<4.0	<5.0	<500 J	<1.0	<5.0	<0.5	<3.0
	3/08			<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.0	<0.5	<3.0
	8/08			<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.6	<0.6	<3.0
	3/09			<10	<1.0	<1.0	<1.0	<3.0	<500	<1.0	<5.0	<0.5	<1.0
	9/09			<10	0.17 J	<1.0	<1.0	<3.0	<500	<1.0	<5.0	<1.0	<1.0
	4/10			<10	<1.0	<1.0	<1.0	<3.0	<500	<1.0	<5.0	<1.0	<1.0
MW-8SR[B]	9/06	362.7	352.7	NS	NS	NS	NS	NS	NS	NS	52,000 [51,000]	<520 [<520]	NS
	11/06			28	16	100	84	270	<500	<1.0	28,000	<200	<3.0
	6/07			58	14	110	83	250	<500	<2.0	2,700	<22	<6.0
	8/07			NS	NS	NS	NS	NS	NS	NS	17,000	<100	NS
	11/07			<5.0 J	12	22	73	210	<500	<1.0	22,000 J	<100 J	<3.0
	3/08			<10 [9.6 J]	5.5 [5.7]	22 [22]	70 [68]	160 [160]	<500 [<500]	<2.0 [<2.0]	5,800 [5,200]	<25 [<50]	<6.0 [<6.0]
	8/08			8.2 J [<10]	11 [11]	24 [22]	70 [70]	190 [190]	<500 [<500]	<2.0 [<2.0]	32,000 [25,000]	<250 [<250]	<6.0 [<6.0]
	3/09			6.5 J [5.8 J]	6.8 [6.8]	10 [10]	66 [63]	140 [140]	<500 [<500]	<1.0 [<1.0]	2,200 [1,800]	<12 [<12]	<1.0 [<1.0]
	6/09			NS	NS	NS	NS	NS	NS	NS	7,000	<50	NS
	9/09			<10 [8.3 J]	8.5 J [7.9]	6.8 J [6.5]	44 J [38]	81 J [71]	<500 [<500]	<1.0 J [<1.0]	4,000 [3,400]	<20 [<20]	<1.0 [<1.0]
	4/10			<10 [<10]	4.2 [3.5]	4.6 [3.7]	23 J [18]	41 [33]	<500 [<500]	<1.0 [<1.0]	370 J [740 J]	1.0 J [<5.0]	<1.0 [<1.0]
MW-9[C]	11/06	365.6	356	<5.0	1.4	3.5 J	23	63	<500	<1.0	0.5 J	3.3 J	<3.0
(Replaced by MW-9S)	6/07			<5.0	1.4	3.3 J	42	110	<500	<1.0	<5.0	4.1	<3.0
	11/07			<5.0	0.9 J	2.0 J	11	58	<500 J	<1.0	1.7 J	8.6	<3.0
	3/08			<5.0 J	1.1	3.0 J	37	73	<500	1.2	0.7 J	8.6	<3.0
	8/08			24	3.7	3.3 J	21	72	<500	<1.0	<5.5	5.1	<3.0
	3/09			<10	1.2	2.5	27	65	<500	<1.0	<5.0	4.2	<1.0
	9/09			<10	1.7	2.2	20	70	730	<1.0	<5.0	4.1	<1.0
	4/10			<10	0.86 J	2.1	26	69	<500	<1.0	<5.0	6.5	<1.0
MW-17[D]	11/06	365.7	356.1	R	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<1.0	<1.0 J	<3.0
(Replaced by MW-17R)	6/07			<5.0	0.7 J	<5.0	<4.0	<5.0	<500	<1.0	<5.0	<1.0	<3.0
	11/07			<5.0	<1.0	<5.0	<4.0	<5.0	<500 J	<1.0	<5.0	<0.5	<3.0
	3/08			<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.0	<0.5	<3.0
	8/08			2.3 J	1.8	<5.0	<4.0	<5.0	<500	<1.0	<5.0	<0.5	<3.0
	3/09			<10	2.3	<1.0	<1.0	<3.0	<500	<1.0	<5.0	<0.5	<1.0
	9/09			<10 J	0.86 J	<1.0	<1.0	<3.0	<500	<1.0	<5.0	<1.0	<1.0
	4/10			<10	0.22 J	<1.0	<1.0	<3.0	<500	<1.0	<5.0	<1.0	<1.0
MW-18	11/06	325.15	316.15	R	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<1.0	<1.0 J	<3.0
	6/07			<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.0	<1.0	<3
	11/07			<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.0	<0.5	<3.0
	3/08			<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.0	<0.5	<3.0
	8/08			5.5	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.6	<0.6	<3.0
	3/09			<10	<1.0	<1.0	<1.0	<3.0	<500	<1.0	<5.0	<0.5	<1.0
	9/09			<10 J	<1.0	<1.0	<1.0	<3.0	<500	<1.0	<5.0	<1.0	<1.0
	4/10			<10	<1.0	<1.0	<1.0	<3.0	<500	<1.0	<5.0	<1.0	33
	6/10			<10	<1.0	<1.0	<1.0	<3.0	NS	<1.0	NS	NS	<1.0

Table 3. Summary of Groundwater Monitoring Data, Aerobic Bioremediation Treatment Program, September 2006 through April 2010, 2010 Biannual Process Control Monitoring Report, McKesson Envirosystems, Former Bear Street Facility, Syracuse, New York

Monitoring Well	Sampling Date	Screen Elev. (feet AMSL) Top	Bottom	Acetone	Benzene	Toluene	Ethyl-benzene	Xylene[A]	Methanol	Trichloro-ethene	Aniline	N,N-Dimethyl-aniline	Methylene Chloride
NYSDEC Groundwater Quality Standards (TOGS 1.1.1)				50	1	5	5	5	NA	5	5	1	5
MW-19	11/06	318.45	309.45	R	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<1.0	<1.0 J	<3.0
	6/07			<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.5	<1.1	<3.0
	11/07			<5.0 J	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.0	<0.5	<3.0
	3/08			<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.0	<0.5	<3.0
	8/08			<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.6	<0.6	<3.0
	3/09			<10	<1.0	<1.0	<1.0	<3.0	<500	<1.0	<5.0	<0.5	<1.0
	9/09			<10 J	<1.0	<1.0	<1.0	<3.0	<500	<1.0	<5.0	<1.0	<1.0
	4/10			<10	<1.0	<1.0	<1.0	<3.0	<500	<1.0	<5.0	<1.0	<1.0
MW-23S	11/06	364.1	354.1	R	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<1.0	<1.0 J	<3.0
	6/07			<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.0	<1.0	<3.0
	11/07			<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.0	<0.5	<3.0
	3/08			<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.0	<0.5	<3.0
	8/08			<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.6	<0.6	<3.0
	3/09			<10	<1.0	<1.0	<1.0	<3.0	<500	<1.0	<5.0	<0.5	<1.0
	9/09			<10 J	<1.0	<1.0	<1.0	<3.0	<500	<1.0	<5.0	<1.0	<1.0
	4/10			<10	<1.0	<1.0	<1.0	<3.0	<500	<1.0	<5.0	<1.0	<1.0
MW-23I	11/06	341.2	336.2	R	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<1.0	<1.0 J	<3.0
	6/07			<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.0	<1.0	<3.0
	11/07			<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.0	<0.5	<3.0
	3/08			<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.0	<0.5	<3.0
	8/08			<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.0	<0.5	<3.0
	3/09			<10	<1.0	<1.0	<1.0	<3.0	<500	<1.0	<5.0	<0.5	<1.0
	9/09			<10 J	<1.0	<1.0	<1.0	<3.0	<500	<1.0	<5.0	<1.0	<1.0
	4/10			<10	<1.0	<1.0	<1.0	<3.0	<500	<1.0	<5.0	<1.0	8.4
	6/10			<10	<1.0	<1.0	<1.0	<3.0	NS	<1.0	NS	NS	<1.0
MW-24S[D]	11/06	358.4	352.4	R	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<1.0	<1.0 J	<3.0
(Replaced by MW-24SR)	11/07			<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.0	<0.5	<3.0
	8/08			<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.7	<0.6	<3.0
	9/09			<10	<1.0	<1.0	<1.0	<3.0	<500	<1.0	<5.0	<1.0	<1.0
MW-24D[D]	11/06	334.4	341.2	R	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<1.0	<1.0 J	<3.0
(Replaced by MW-24DR)	11/07			<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.0	<0.5	<3.0
	8/08			<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.7	<0.6	<3.0
	9/09			<10	<1.0	<1.0	<1.0	<3.0	<500	<1.0	<5.0	<1.0	<1.0
MW-25S	11/06	361.2	356.2	R	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<1.0	<1.0 J	<3.0
	6/07			<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.0	<1.0	<3.0
	11/07			<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.0	<0.5	<3.0
	3/08			<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.0	<0.5	<3.0
	8/08			<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.2	<0.5	<3.0
	3/09			<10	<1.0	<1.0	<1.0	<3.0	<500	<1.0	<5.0	<0.5	<1.0
	9/09			<10 J	<1.0	<1.0	<1.0	<3.0	<500	<1.0	<5.0	<1.0	<1.0
	4/10			<10	<1.0	<1.0	<1.0	<3.0	<500	<1.0	<5.0	<1.0	<1.0
MW-25D	6/07	349.55	344.55	12 J	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.0	<1.0	<3.0
	3/08			<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.0	<0.5	<3.0
	3/09			<10	<1.0	<1.0	<1.0	<3.0	<500	<1.0	<5.0	<0.5	<1.0
	4/10			<10	<1.0	<1.0	<1.0	<3.0	<500	<1.0	<5.0	<1.0	<1.0
MW-27	9/06	362.5	354.5	NS	NS	NS	NS	NS	NS	NS	1,700	<10	NS
	11/06			31 [24]	14 [14]	71 [71]	42 [45]	91 [110]	<500 [<500]	<1.0 [<1.0]	33,000 [33,000]	<210 [<200]	<3.0 [<3.0]
	6/07			21	8.4	9.5	14	24	<500	<1.0	1,100	<10	<3.0
	8/07			NS	NS	NS	NS	NS	NS	NS	<10 J [4,300 J]	<1.0 [<20]	NS
	11/07			<5.0 J [<5.0]	6.6 [5.9]	4.7 J [4.1 J]	8.6 [7.2]	24 [21]	<500 [<500]	<1.0 [<1.0]	3,000 J [3,800 J]	<25 J [<25 J]	<3.0 [<3.0]
	3/08			21	9.4	23	43	68	<500	<2.0	13,000	<100	<6.0
	8/08			3.8 J	5	2.2 J	1.8 J	10	<500	<1.0	2,400	<25	<3.0
	3/09			14 J	8.7	9.4	36	88	<500	<1.0	8,200 J	<50 J	<1.0
	6/09			NS	NS	NS	NS	NS	NS	NS	7,400	<50	NS
	9/09			10	6.2	6.9	5.9	23	<500	<1.0	2,100	<10	<1.0
	4/10			<10	4.5	2.4	6.1	10	<500	<1.0	1,300	<10	<1.0

Table 3. Summary of Groundwater Monitoring Data, Aerobic Bioremediation Treatment Program, September 2006 through April 2010, 2010 Biannual Process Control Monitoring Report, McKesson Envirosystems, Former Bear Street Facility, Syracuse, New York

Monitoring Well	Sampling Date	Screen Elev. (feet AMSL) Top	Bottom	Acetone	Benzene	Toluene	Ethyl-benzene	Xylene[A]	Methanol	Trichloro-ethene	Aniline	N,N-Dimethyl-aniline	Methylene Chloride
NYSDEC Groundwater Quality Standards (TOGS 1.1.1)				50	1	5	5	5	NA	5	5	1	5
MW-28	9/06	363.6	355.6	NS	NS	NS	NS	NS	NS	NS	280	<2.2	NS
	11/06			12	8.2	1.4 J	5.6	4.4 J	<500	<1.0	1,000	<5.2	<3.0
	6/07			13	4.6	0.4 J	0.8 J	0.6 J	<500	<1.0	60	<1.0	<3.0
	8/07			NS	NS	NS	NS	NS	NS	NS	40	<1.0	NS
	11/07			<5.0 J	4.5	0.5 J	1.4 J	0.8 J	<500	<1.0	29 J	<0.5 J	<3.0
	3/08			<5.0	4.0	0.5 J	1.6 J	1.3 J	<500	<1.0	81	0.9	<3.0
	8/06			<5.0	3.8	<5.0	<4.0	<5.0	<500	<1.0	0.7 J	<0.5	<3.0
	3/09			<10	3.5	0.3 J	0.8 J	1.1 J	851	<1.0	18	<0.5	<1.0
	9/09			<10	3.1	0.25 J	0.32 J	0.48 J	<500	<1.0	6.7	<1.0	<1.0
	4/10			<10	2.8	0.23 J	0.60 J	0.46 J	<500	<1.0	<5.0	0.49 J	<1.0
MW-29	11/06	362.9	345.9	5.4	<1.0	<5.0	<4.0	<5.0	<500	<1.0	0.4 J	<1.0	<3.0
	6/07			<5.0	<1.0	<5.0	<4.0	0.5 J	<500	<1.0	<5.5	<1.1	<3.0
	11/07			<5.0 J	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.0 J	<0.5 J	<3.0
	3/08			<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.0	<0.5	<3.0
	8/08			<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.0	<0.5	<3.0
	3/09			<10	<1.0	<1.0	<1.0	<3.0	<500	<1.0	<5.0	<0.5	<1.0
	9/09			<10	<1.0	0.16 J	<1.0	<3.0	<500	<1.0	<5.0	0.29 J	<1.0
	4/10			<10	<1.0	<1.0	<1.0	<3.0	<500	<1.0	<5.0	<1.0	<1.0
MW-30	11/06	363.5	355.5	11	1.0	<5.0	<4.0	<5.0	<500	<1.0	200	<1.0	<3.0
	6/07			<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	30	<1.1	<3.0
	11/07			<5.0 J	0.8 J	<5.0	<4.0	<5.0	<500	<1.0	49	<0.5	<3.0
	3/08			<5.0	0.6 J	<5.0	<4.0	0.2 J	<500	<1.0	3.0 J	0.7	<3.0
	8/08			<5.0	0.7 J	<5.0	<4.0	<5.0	<500	<1.0	31	<0.5	<3.0
	3/09			<10	0.8 J	<1.0	<1.0	<3.0	<500	<1.0	<5.0	<0.5	<1.0
	9/09			<10	0.78 J	0.17 J	<1.0	<3.0	<500	<1.0	21	<1.0	<1.0
	4/10			<10	<1.0	<1.0	<1.0	<3.0	<500	<1.0	<5.0	<1.0	<1.0
MW-31	9/06	363.7	355.4	NS	NS	NS	NS	NS	NS	NS	1.6	3.4	NS
	11/06			R	6.9	<5.0	<4.0	<5.0	<500	<1.0	0.4 J	1.1 J	<3.0
	6/07			<5.0	14	0.7 J	<4.0	1.3 J	<500	<1.0	<5.0	2.0	<3.0
	8/07			NS	NS	NS	NS	NS	NS	NS	0.5 J	2.7	NS
	11/07			<5.0 [<5.0]	12 [10]	<5.0 [0.4 J]	<4.0 [<4.0]	1.1 J [1.4 J]	<500 J [<500 J]	<1.0 [<1.0]	<5.0 [0.3 J]	2.3 [2.8]	<3.0 [<3.0]
	3/08			<5.0 J	2.0	<5.0	<4.0	<5.0	<500	<1.0	0.2 J	1.6	<3.0
	8/08			22	13	0.4 J	<1.0	2.2 J	<500	<1.0	<5.6	2.4	<3.0
	3/09			9.4 J	8.3	0.6 J	< 1.0	0.8 J	<500	<1.0	<5.0	2.3	<1.0
	9/09			<10	10	0.49 J	<1.0	2.0 J	730	<1.0	<5.0	2.5	<1.0
	4/10			<10	4.6	0.40 J	<1.0	1.3 J	<500	<1.0	<5.0	2.3	<1.0
MW-32	11/06	364	356	R	<1.0	0.8 J	<4.0	<5.0	<500	<1.0	<1.0	<1.0 J	<3.0
	6/07			<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.0	<1.0	<3.0
	11/07			<5.0	<1.0	<5.0	<4.0	<5.0	<500 J	<1.0	0.1 J	0.8	<3.0
	3/08			<5.0 J	0.8 J	<5.0	<4.0	<5.0	<500	<1.0	<5.0	0.8	<3.0
	8/08			5.8	0.3 J	<5.0	<4.0	<5.0	<500	<1.0	<5.7	<0.6	<3.0
	3/09			<10	0.5 J	<1.0	<1.0	<3.0	<500	<1.0	<5.0	<0.5	<1.0
	9/09			<10	<1.0	<1.0	<1.0	<3.0	1,200	<1.0	<5.0	1.1	<1.0
	4/10			<10	0.23 J	<1.0	<1.0	<3.0	<500	<1.0	<5.0	0.89 J	<1.0
MW-33	9/06	344.1	356.1	NS	NS	NS	NS	NS	NS	NS	940	8.0	NS
	11/06			17 J	8.6	0.7 J	<4.0	<5.0	<500	<1.0	84	2.9 J	<3.0
	6/07			<5.0	8.7	0.4 J	<4.0	<5.0	<500	<1.0	46	2.6	<3.0
	8/07			NS	NS	NS	NS	NS	NS	NS	46	4.2	NS
	11/07			<5.0	4.0	<5.0	<4.0	<5.0	<500 J	<1.0	0.1 J	3.5	<3.0
	3/08			<5.0 J	4.1	<5.0	<4.0	<5.0	<500	<1.0	<5.0	4.1	<3.0
	8/08			<5.0	3.2	<5.0	<4.0	<5.0	<500	<1.0	<5.9	2.8	<3.0
	3/09			<10	3.2	<1.0	<1.0	<3.0	<500	<1.0	<5.0	2.4	<1.0
	9/09			<10	2.6	0.20 J	<1.0	<3.0	<500	<1.0	<5.0	<1.0	<1.0
	4/10			<10	1.6	<1.0	<1.0	<3.0	<500	<1.0	<5.0	2.0	<1.0

Table 3. Summary of Groundwater Monitoring Data, Aerobic Bioremediation Treatment Program, September 2006 through April 2010, 2010 Biannual Process Control Monitoring Report, McKesson Envirosystems, Former Bear Street Facility, Syracuse, New York

Monitoring Well	Sampling Date	Screen Elev. (feet AMSL) Top	Bottom	Acetone	Benzene	Toluene	Ethyl-benzene	Xylene[A]	Methanol	Trichloro-ethene	Aniline	N,N-Dimethyl-aniline	Methylene Chloride
NYSDEC Groundwater Quality Standards (TOGS 1.1.1)				50	1	5	5	5	NA	5	5	1	5
MW-34	11/06	362.7	354.7	49 J	<1.0	0.6 J	<4.0	0.6 J	<500	<1.0	9.9	1.2 J	<3.0
	6/07			22	0.9 J	0.5 J	<4.0	0.6 J	<500	<1.0	<5.0	<1.0	<3.0
	11/07			<5.0	0.8 J	0.6 J	<4.0	1.1 J	<500 J	<1.0	0.3 J	1.5	<3.0
	3/08			16	1.0 J	0.5 J	<4.0	1.1 J	<500	<1.0	24	1.3	<3.0
	8/08			12	0.8 J	0.5 J	<4.0	1.1 J	<500	<1.0	0.6 J	1.6	<3.0
	3/09			14	1.4	0.7 J	<1.0	1.5 J	<500	<1.0	12	2.0	<1.0
	9/09			24	<1.0	0.64 J	<1.0	1.7 J	1,000	<1.0	<5.0	2.5	<1.0
	4/10			50 J	0.82 J	0.42 J	<1.0	1.4 J	<500	<1.0	<5.0	2.4	<1.0
MW-35	11/06	363	355	R	<1.0	<5.0	<4.0	<5.0	<500	<1.0	1.1	<1.0 J	<3.0
	6/07			13	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.0	<1.0	<3.0
	11/07			<5.0	<1.0	<5.0	<4.0	<5.0	<500 J	<1.0	<5.0	<0.5	<3.0
	3/08			<5.0 J	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.0	<0.5	<3.0
	8/08			5.4	<1.0	<5.0	<4.0	<5.0	<500	<1.0	1.1 J	<0.5	<3.0
	3/09			<10	<1.0	<1.0	<1.0	<3.0	<500	<1.0	<5.0	<0.5	<1.0
	9/09			6.5 J	<1.0	0.16 J	<1.0	<3.0	1,100	<1.0	<5.0	<1.0	<1.0
	4/10			<10 J	<1.0	<1.0	<1.0	<3.0	<500	<1.0	<5.0	<1.0	<1.0
MW-36	9/06	363.6	355.6	NS	NS	NS	NS	NS	NS	NS	3.5	1.2	NS
	11/06			130 J	3.6	1.2 J	<4.0	1.1 J	<500	<1.0	420	1.7 J	<3.0
	6/07			33	4.6	1.4 J	0.8 J	5.0	<500	<1.0	1,300	<10	<3.0
	8/07			NS	NS	NS	NS	NS	NS	NS	740	<5.0	NS
	11/07			10	4.5	1.7 J	0.9 J	5.3	<500 J	<1.0	480 J	3.4 J	<3.0
	3/08			8.0 J	4.2	1.5 J	0.8 J	5.5	<500	<1.0	130	3.0	<3.0
	8/08			27	3.7	1.4 J	0.6 J	5.7	<500	<1.0	4.5 J	3.2	<3.0
	3/09			28	2.4	0.8 J	<1.0	2.8 J	<500	<1.0	150	2.8	<1.0
	6/09			NS	NS	NS	NS	NS	NS	NS	460	<5.0	NS
	9/09			21	3.1	0.96 J	<1.0	3.2	<500	<1.0	390	3.1	<1.0
	4/10			<10 J	3.3	1.1	0.26 J	5.4	<500	<1.0	77	2.6	<1.0
TW-01	11/06	365.1	355.4	R	0.7 J	<5.0	<4.0	<5.0	<500	<1.0	<1.0	<1.0 J	<3.0
	6/07			7.8	0.5 J	<5.0	<4.0	<5.0	<500	<1.0	<5.0	<1.0	<3.0
	11/07			<5.0	<1.0	<5.0	<4.0	<5.0	<500 J	<1.0	0.2 J	1.1	<3.0
	3/08			<5.0 J	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.0	1.0	<3.0
	8/08			<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.6	<0.6	<3.0
	3/09			<10	1.9	<1.0	<1.0	0.6 J	22,300	<1.0	<5.0	<0.5	<1.0
	9/09			2.9 J	<1.0	0.11 J	<1.0	<3.0	970	<1.0	<5.0	1.1	<1.0
	4/10			<10	0.32 J	<1.0	<1.0	<3.0	<500	<1.0	<5.0	1.0	<1.0
TW-02RR[B]	9/06	363.3	353.3	NS	NS	NS	NS	NS	NS	NS	7,600	<52	NS
	11/06			78 J	4.9	1.4 J	2.2 J	6.2	<500	<1.0	2,100	<10 J	<3.0
	6/07			17	5.5	1.3 J	4.0	8.8	<500	<1.0	6,800	<100	<3.0
	8/07			NS	NS	NS	NS	NS	NS	NS	4,000 J	<20	NS
	11/07			5.5	5.8	1.2 J	3.0 J	7.6	<500 J	<1.0	3,700	<25	<3.0
	3/08			6.4 [5.2]	4.5 J [2.3 J]	1.3 J [0.7 J]	3.8 J [1.9 J]	10 [4.8 J]	<500 [<500]	<1.0 [<1.0]	7,500 [5,400]	<50 [<50]	<3.0 [<3.0]
	8/08			9.0 [9.6]	4.4 [4.6]	1.0 J [1.1 J]	2.3 J [2.4 J]	6.7 [7.0]	<500 [<500]	<1.0 [<1.0]	9,600 [7,000]	<71 [<56]	<3.0 [<3.0]
	3/09			<10 [<10]	5.0 [4.6]	1.0 [1.0 J]	1.5 [1.6]	4.2 [4.1]	<500 [<500]	<1.0 [<1.0]	2,000 [1,600]	<10 [<10]	<1.0 [<1.0]
	6/09			NS	NS	NS	NS	NS	NS	NS	2,800	<20	NS
	9/09			<10 [<10]	4.3 [4.2]	0.79 J [0.81 J]	1.2 [1.3]	3.5 [3.6]	1,000 [1,200]	<1.0 [<1.0]	1,600 [1,500]	<10 [<10]	<1.0 [<1.0]
	4/10			9.5 J [12 J]	4.1 [4.0]	0.78 J [0.75 J]	1.2 [1.2]	4.2 [4.0]	<500 [<500]	<1.0 [<1.0]	2,800 J [3,100 J]	<20 J [<20 J]	<1.0 [<1.0]
PZ-4D	6/07	350.8	345.9	<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.5	<1.1	<3
	3/08			<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.0	<0.5	<3.0
	3/09			<10	<1.0	<1.0	<1.0	<3.0	<500	<1.0	<5.0	<0.5	<1.0
	4/10			<10	<1.0	<1.0	<1.0	<3.0	<500	<1.0	<5.0	<1.0	5.3 J
	6/10			<10	<1.0	<1.0	<1.0	<3.0	NS	<1.0	NS	NS	<1.0

Table 3. Summary of Groundwater Monitoring Data, Aerobic Bioremediation Treatment Program, September 2006 through April 2010, 2010 Biannual Process Control Monitoring Report, McKesson Envirosystems, Former Bear Street Facility, Syracuse, New York

Monitoring Well	Sampling Date	Screen Elev. (feet AMSL) Top	Bottom	Acetone	Benzene	Toluene	Ethyl-benzene	Xylene[A]	Methanol	Trichloro-ethene	Aniline	N,N-Dimethyl-aniline	Methylene Chloride
NYSDEC Groundwater Quality Standards (TOGS 1.1.1)				50	1	5	5	5	NA	5	5	1	5
PZ-4S	6/07	362.79	357.88	<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.5	<1.1	<3.0
	3/08			<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.0	<0.5	<3.0
	3/09			<10	<1.0	<1.0	<1.0	<3.0	<500	<1.0	<5.0	<0.5	<1.0
	4/10			<10	<1.0	<1.0	<1.0	<3.0	<500	<1.0	<5.0	<1.0	17
	6/10			<10 J	<1.0	<1.0	<1.0	<3.0	NS	<1.0	NS	NS	<1.0
PZ-5D	11/06	353.5	348.6	R	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<1.0	<1.0 J	<3.0
	11/07			<5.0 J	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.0	<0.5	<3.0
	8/08			<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.1	<0.5	<3.0
	9/09			<10 J	<1.0	<1.0	<1.0	<3.0	<500	<1.0	<5.0	<1.0	<1.0
PZ-5S	11/06	361.42	356.52	R	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<1.0	<1.0 J	<3.0
	11/07			<5.0 J	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.0	<0.5	<3.0
	8/08			<5.0	<1.0	<5.0	<4.0	<5.0	<500	<1.0	<5.3	<0.5	<3.0
	9/09			<10 J	<1.0	<1.0	<1.0	<3.0	<500	<1.0	<5.0	<1.0	<1.0

General Notes:

1. Concentrations are presented in micrograms per liter, which is equivalent to parts per billion.
2. Compounds detected are indicated by bold-faced type.
3. Detections exceeding New York State Department of Environmental Conservation (NYSDEC) Groundwater Standards (TOGS 1.1.1; NYSDEC, 1998) are indicated by shading.
4. Duplicate sample results are presented in brackets (e.g., [14]).
5. Replacement wells for MW-8 and MW-9 were installed 8/95.
6. Replacement wells for MW-17, MW-24S, MW-24D, and TW-02 were installed 11/97 - 12/97.
7. The sampling events in 9/06 and 8/07 were interim sampling events to gauge the effects of the in-situ aerobic biodegradation treatment activities.
8. The laboratory analytical results for the duplicate sample collected from monitoring well MW-27 during the 8/07 sampling event indicated the presence of aniline at 4,300 micrograms per liter. Because aniline was not detected in the original sample, MW-27, DUP-1, and TW-02RR were all reanalyzed outside of hold time due to the difference in concentration between the parent sample and the field duplicate. The duplicate result for aniline was positively identified; however, the associated numerical value is an estimated concentration only. The concentration for TW-02RR was significantly lower than the original result. Therefore, the original result for TW-02RR was qualified as estimated.
9. The sampling event in 6/10 was an interim sampling event to check for the presence of methylene chloride.

Superscript Notes:

[A] = Data presented is total xylenes (m- and p-xylenes and o-xylenes).
[B] = Wells MW-8S and TW-02R were abandoned in 8/04 and replacement wells MW-8SR and TW-02RR were installed in 8/04.
[C] = Well MW-9 was abandoned during OU1 soil remediation activities (1994).
[D] = Wells/piezometers MW-17, MW-24S, and MW-24D were abandoned 11/97 - 1/98.

Abbreviations:

AMSL = Above mean sea level (NGVD of 1929).
NA = Standard not available.
NS = Not sampled.
TOGS = Technical & Operational Guidance Series

Analytical Qualifiers:

J = The compound was positively identified; however, the numerical value is an estimated concentration only.
< = Compound was not detected at the listed quantitation limit.
R = The sample results were rejected.

Table 4. Summary of Dissolved Oxygen Measurements, August 2006 through June 2010, 2010 Biannual Process Control Monitoring Report, McKesson Envirosystems, Former Bear Street Facility, Syracuse, New York

Date	Dissolved Oxygen (ppm)					
	MW-33 (Area 1)	MW-36 (Area 2)	TW-02RR (Area 2)	MW-27 (Area 3)	MW-28 (Area 3)	MW-8SR (Area 3)
8/21/06	N/R	N/R	N/R	N/R	3.35	N/R
8/28/06	0.28	N/R	N/R	0.88	2.18	N/R
9/1/06	0.53	N/R	N/R	0.41	0.40	N/R
9/8/06	0.22	N/R	N/R	0.42	0.53	N/R
9/21/06	0.17	N/R	N/R	0.21	0.37	N/R
9/29/06	0.28	N/R	N/R	0.37	0.40	N/R
10/6/06	0.16	N/R	N/R	0.43	0.29	N/R
10/13/06	0.21	N/R	N/R	0.33	0.31	N/R
10/28/06	0.17	N/R	N/R	0.24	0.29	N/R
11/10/06	0.37	N/R	N/R	0.33	0.38	N/R
11/16/06	0.27	N/R	N/R	0.23	0.21	N/R
11/22/06	0.41	N/R	N/R	0.37	0.42	N/R
12/4/06	0.29	N/R	N/R	0.23	0.32	N/R
12/7/06	0.24	N/R	N/R	0.22	0.29	N/R
12/14/06	0.57	N/R	N/R	0.27	0.32	N/R
1/7/07	0.30	N/R	N/R	0.27	0.21	N/R
1/12/07	0.24	N/R	N/R	0.27	0.30	N/R
1/19/07	0.23	N/R	N/R	0.20	0.37	N/R
1/26/07	0.26	N/R	N/R	0.61	0.57	N/R
2/9/07	0.24	N/R	N/R	0.28	0.44	N/R
2/22/07	0.33	N/R	N/R	0.44	0.30	N/R
3/2/07	0.62	N/R	N/R	0.20	0.36	N/R
3/16/07	0.29	N/R	N/R	0.37	0.55	N/R
3/23/07	0.25	N/R	N/R	0.22	0.46	N/R
3/30/07	0.47	N/R	N/R	0.45	0.79	N/R
4/5/07	0.31	N/R	N/R	0.59	0.91	N/R
4/19/07	0.32	N/R	N/R	0.27	0.73	N/R
4/26/07	0.26	N/R	N/R	0.49	0.48	N/R
5/11/07	0.50	N/R	N/R	0.43	0.58	N/R
5/25/07	0.22	N/R	N/R	0.53	0.81	N/R
6/1/07	0.30	N/R	N/R	0.32	0.70	N/R
6/29/07	0.48	0.90	N/R	1.87	2.76	N/R
7/3/07	0.21	0.48	N/R	0.43	0.66	N/R
7/13/07	0.38	0.38	N/R	0.68	1.18	N/R
7/19/07	0.36	0.22	N/R	0.52	0.98	N/R
7/27/07	0.24	0.32	N/R	0.50	0.86	N/R
8/3/07	0.47	0.47	N/R	0.57	0.79	N/R
8/9/07	0.63	0.31	N/R	0.42	0.70	N/R
8/16/07	0.37	0.31	N/R	0.40	0.85	N/R
8/24/07	0.38	0.33	N/R	0.50	0.88	N/R
8/31/07	0.54	0.40	N/R	0.52	0.77	N/R
9/7/07	0.47	0.40	N/R	0.35	0.52	N/R
9/14/07	0.40	0.38	N/R	0.39	0.83	N/R
9/21/07	0.36	0.31	N/R	0.34	0.46	N/R
9/28/07	0.28	0.43	N/R	0.57	0.71	N/R
10/5/07	0.38	0.41	N/R	0.41	0.68	N/R
10/12/07	0.41	0.44	N/R	0.65	1.03	N/R
10/19/07	0.44	0.52	N/R	0.59	1.02	N/R
10/26/07	0.32	0.50	N/R	0.71	1.04	N/R
11/2/07	0.38	0.48	N/R	0.44	0.90	N/R
11/9/07	0.43	0.43	N/R	0.68	1.04	N/R
11/16/07	0.50	0.64	N/R	0.33	0.38	N/R
11/21/07	0.56	0.32	N/R	0.44	1.24	N/R
11/30/07	0.42	0.51	N/R	0.84	1.28	N/R
12/7/07	0.44	0.41	N/R	0.54	0.66	N/R
12/14/07	0.49	0.55	N/R	0.55	1.02	N/R
12/20/07	0.45	0.44	N/R	0.89	0.90	N/R
12/28/07	0.42	0.46	N/R	0.56	1.10	N/R
1/4/2008	0.46	0.39	N/R	0.77	0.89	N/R
1/11/2008	0.48	0.36	N/R	0.64	0.91	N/R
1/18/2008	0.45	0.44	N/R	0.74	1.02	N/R

Table 4. Summary of Dissolved Oxygen Measurements, August 2006 through June 2010,
2010 Biannual Process Control Monitoring Report, McKesson Envirosystems, Former Bear Street Facility, Syracuse, New York

Date	Dissolved Oxygen (ppm)					
	MW-33 (Area 1)	MW-36 (Area 2)	TW-02RR (Area 2)	MW-27 (Area 3)	MW-28 (Area 3)	MW-8SR (Area 3)
1/25/2008	0.42	0.33	N/R	0.96	0.92	N/R
2/1/2008	0.43	0.38	N/R	0.89	1.00	N/R
2/8/2008	0.42	0.61	N/R	0.63	0.77	N/R
2/15/2008	0.46	0.54	N/R	0.86	0.99	N/R
2/22/2008	0.53	0.51	N/R	0.84	0.71	N/R
2/29/2008	0.44	0.45	N/R	0.73	0.92	N/R
3/7/2008	0.61	0.45	N/R	0.74	1.01	N/R
3/14/2008	0.65	0.34	N/R	0.77	0.82	N/R
3/21/2008	0.65	0.46	N/R	0.63	0.81	N/R
3/28/2008	0.62	0.33	N/R	0.71	0.87	N/R
4/4/2008	0.66	0.44	N/R	0.68	0.98	N/R
4/9/2008	0.77	0.35	N/R	0.54	0.79	N/R
4/20/2008	0.68	0.44	N/R	0.64	0.77	N/R
4/25/2008	0.48	0.61	N/R	0.43	0.76	N/R
5/2/2008	0.44	0.48	N/R	0.66	0.79	N/R
5/9/2008	0.46	0.41	N/R	0.67	0.81	N/R
5/16/2008	0.49	0.44	N/R	0.79	0.97	N/R
5/22/2008	0.38	0.4	N/R	0.43	0.59	N/R
5/30/2008	0.44	0.34	N/R	0.72	0.55	N/R
6/6/2008	0.31	0.33	N/R	0.40	0.67	N/R
6/13/2008	0.38	0.37	N/R	0.48	0.58	N/R
6/20/2008	0.41	0.70	N/R	0.40	0.58	N/R
6/27/2008	0.68	0.90	N/R	0.69	1.02	N/R
7/2/2008	0.97	0.88	N/R	1.03	1.18	N/R
7/10/2008	1.07	0.86	N/R	1.24	1.40	N/R
7/18/2008	2.06	1.89	N/R	2.03	2.31	N/R
7/23/2008	1.94	1.75	N/R	1.98	2.42	N/R
8/1/2008	1.29	1.12	N/R	1.27	1.48	N/R
8/8/2008	1.21	1.38	N/R	1.43	1.71	N/R
8/15/2008	1.29	1.53	N/R	1.68	1.94	N/R
8/22/2008	1.06	1.05	N/R	1.07	1.40	N/R
8/29/2008	1.18	0.98	N/R	1.04	1.32	N/R
9/5/2008	0.90	0.78	N/R	1.02	1.17	N/R
9/12/2008	0.85	0.83	N/R	0.87	1.00	N/R
9/19/2008	0.91	1.03	N/R	0.97	1.07	N/R
9/25/2008	0.74	0.68	N/R	0.74	0.96	N/R
10/3/2008	0.77	0.54	N/R	0.81	0.92	N/R
10/10/2008	0.71	0.58	N/R	0.77	1.03	N/R
10/17/2008	0.69	0.62	N/R	0.70	0.98	N/R
10/23/2008	0.66	0.89	N/R	0.91	0.71	N/R
10/31/2008	0.47	0.50	N/R	0.62	0.68	N/R
11/7/2008	0.42	0.58	0.43	0.53	0.53	0.60
11/14/2008	0.55	0.66	1.15	0.74	0.63	0.70
11/21/2008	0.90	0.81	0.90	1.02	1.20	1.02
11/25/2008	0.90	0.78	0.88	0.80	1.12	0.88
12/4/2008	0.74	0.78	0.76	0.94	1.02	0.92
12/12/2008	0.77	0.79	0.79	0.96	1.09	0.88
12/18/2008	0.80	0.83	0.80	0.84	1.03	0.86
12/22/2008	0.78	0.82	0.79	0.91	1.09	0.87
12/29/2008	0.83	0.80	0.86	0.84	0.98	0.93
1/9/2009	1.01	0.97	0.96	1.00	1.33	1.02
1/13/2009	1.12	0.96	0.94	0.98	1.28	1.01
1/23/2009	1.18	0.85	0.96	1.04	1.35	1.00
1/30/2009	1.16	0.88	0.91	0.99	1.19	0.98
2/6/2009	1.07	1.28	1.30	1.67	3.30	2.34
2/13/2009	1.08	1.03	0.97	1.07	2.04	1.23
2/20/2009	1.08	1.10	0.96	1.34	2.38	1.29
2/26/2009	0.80	0.97	0.86	1.20	1.44	1.12
3/6/2009	0.73	0.96	0.93	0.97	1.20	1.01
3/13/2009	0.81	1.26	1.05	1.16	1.68	1.16
3/20/2009	0.83	1.00	2.34	1.05	1.32	1.10
3/27/2009	0.50	0.56	0.55	0.80	0.95	0.76

Table 4. Summary of Dissolved Oxygen Measurements, August 2006 through June 2010, 2010 Biannual Process Control Monitoring Report, McKesson Envirosystems, Former Bear Street Facility, Syracuse, New York

Date	Dissolved Oxygen (ppm)					
	MW-33 (Area 1)	MW-36 (Area 2)	TW-02RR (Area 2)	MW-27 (Area 3)	MW-28 (Area 3)	MW-8SR (Area 3)
4/2/2009	0.55	0.55	0.94	0.53	0.82	0.60
4/7/2009	0.68	0.71	0.87	0.77	0.91	0.78
4/19/2009	0.77	0.68	0.93	0.81	0.98	0.77
4/24/2009	0.43	0.48	0.39	0.60	0.73	0.74
5/1/2009	0.43	0.46	0.43	0.81	0.87	1.02
5/8/2009	0.40	0.54	0.43	0.58	1.03	0.55
5/15/2009	0.41	0.38	0.34	0.60	0.88	0.51
5/22/2009	0.43	0.44	0.40	0.53	0.70	0.65
5/29/2009	0.41	0.46	0.38	0.58	0.81	0.55
6/5/2009	0.38	0.58	0.62	0.34	0.60	0.48
6/12/2009	0.28	0.40	0.31	0.60	0.44	0.44
6/26/2009	0.34	0.43	0.34	0.52	0.45	0.42
6/29/2009	0.33	0.42	0.57	0.50	0.83	0.60
7/7/2009	0.31	0.44	0.48	0.55	0.81	0.64
7/16/2009	0.30	0.37	0.27	0.37	0.73	0.43
7/24/2009	0.30	0.30	0.22	0.44	0.53	0.37
7/29/2009	0.33	0.36	0.28	0.41	0.55	0.41
8/7/2009	0.30	0.46	0.35	0.36	0.92	0.39
8/12/2009	0.31	0.41	0.28	0.42	0.41	0.34
8/20/2009	0.33	0.32	0.27	0.44	0.53	0.40
8/28/2009	0.25	0.31	0.34	0.52	0.77	0.47
9/3/2009	0.31	0.37	0.35	0.48	0.68	0.44
9/25/2009	0.45	0.58	0.35	0.52	0.73	0.50
10/2/2009	0.44	0.55	0.33	0.54	0.78	0.51
10/9/2009	0.41	0.53	0.32	0.58	0.95	0.77
10/15/2009	0.48	0.55	0.37	0.61	0.71	0.58
10/23/2009	0.43	0.51	0.54	0.80	0.74	0.61
11/17/2009	0.48	0.55	0.56	0.78	0.84	0.68
12/4/2009	0.42	0.53	0.48	0.76	0.88	0.71
1/20/2010	0.62	0.59	0.55	0.81	0.90	0.67
2/26/2010	0.57	0.51	0.47	0.77	0.91	0.74
3/12/2010	0.85	0.90	0.74	1.11	0.91	1.02
4/9/2010	0.78	0.94	0.68	0.98	0.87	0.86
5/7/2010	0.84	0.91	0.73	0.84	1.97	0.96
6/22/2010	0.52	0.47	0.60	0.47	0.82	0.58

Notes:

1. No readings were taken at MW-36 between 8/21/2008 and 6/1/2008.
2. DO readings were taken at TW-02RR and MW-8SR beginning 11/7/2008, just after the installation of the oxygen infusion system in Areas 2 and 3.

Abbreviations:

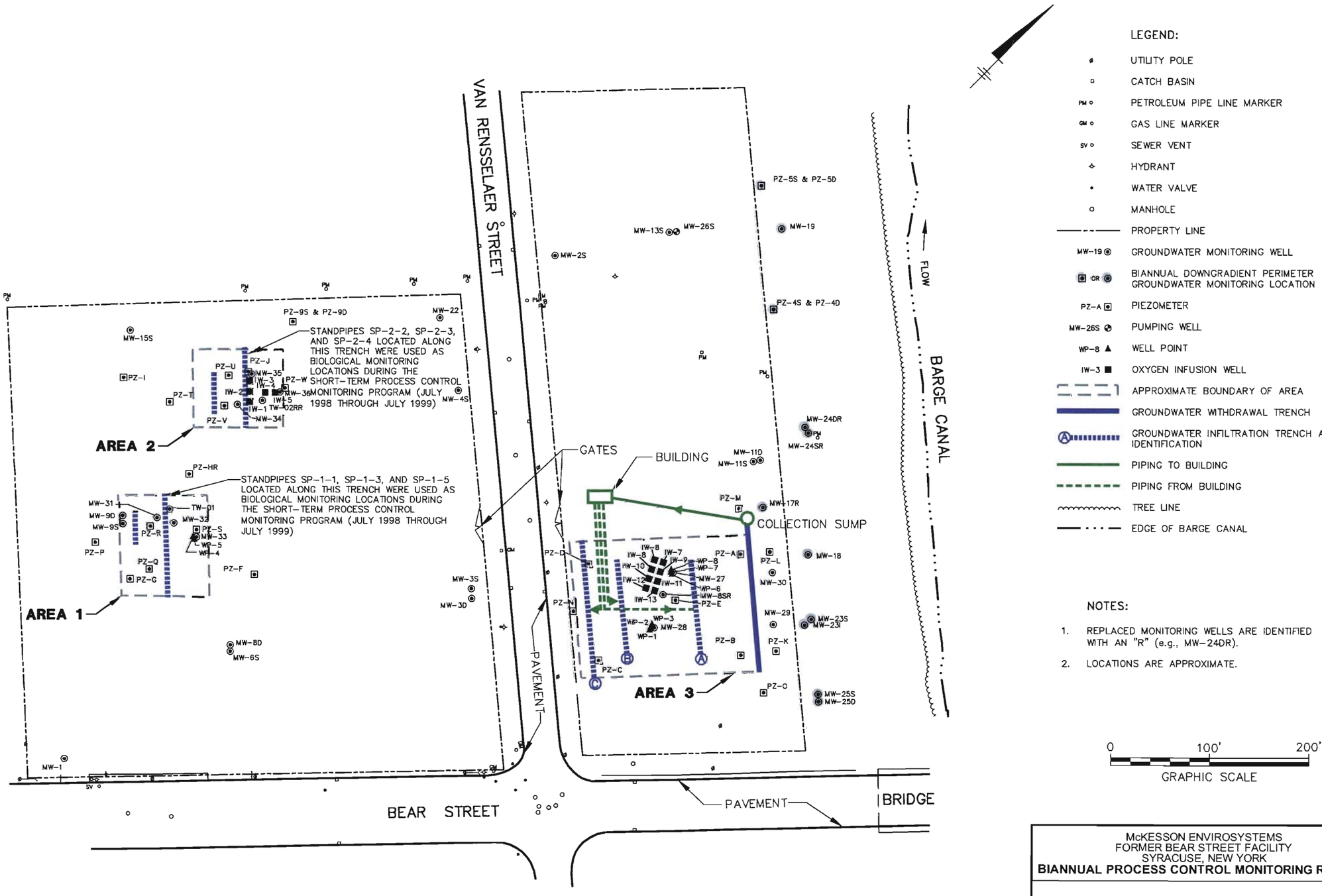
DO = dissolved oxygen.

N/R = no reading was taken.

ppm = parts per million.

ARCADIS

Figures



LEGEND:

- UTILITY POLE
- CATCH BASIN
- PETROLEUM PIPE LINE MARKER
- GAS LINE MARKER
- SEWER VENT
- HYDRANT
- WATER VALVE
- MANHOLE
- PROPERTY LINE
- MW-19 GROUNDWATER MONITORING WELL
- OR BIANNUAL DOWNGRADIENT PERIMETER GROUNDWATER MONITORING LOCATION
- PZ-A PIEZOMETER
- MW-26S PUMPING WELL
- WP-8 WELL POINT
- IW-3 OXYGEN INFUSION WELL
- APPROXIMATE BOUNDARY OF AREA
- GROUNDWATER WITHDRAWAL TRENCH
- GROUNDWATER INFILTRATION TRENCH AND IDENTIFICATION
- PIPING TO BUILDING
- PIPING FROM BUILDING
- TREE LINE
- EDGE OF BARGE CANAL

NOTES:

1. REPLACED MONITORING WELLS ARE IDENTIFIED WITH AN "R" (e.g., MW-24DR).
2. LOCATIONS ARE APPROXIMATE.

0 100' 200'

GRAPHIC SCALE

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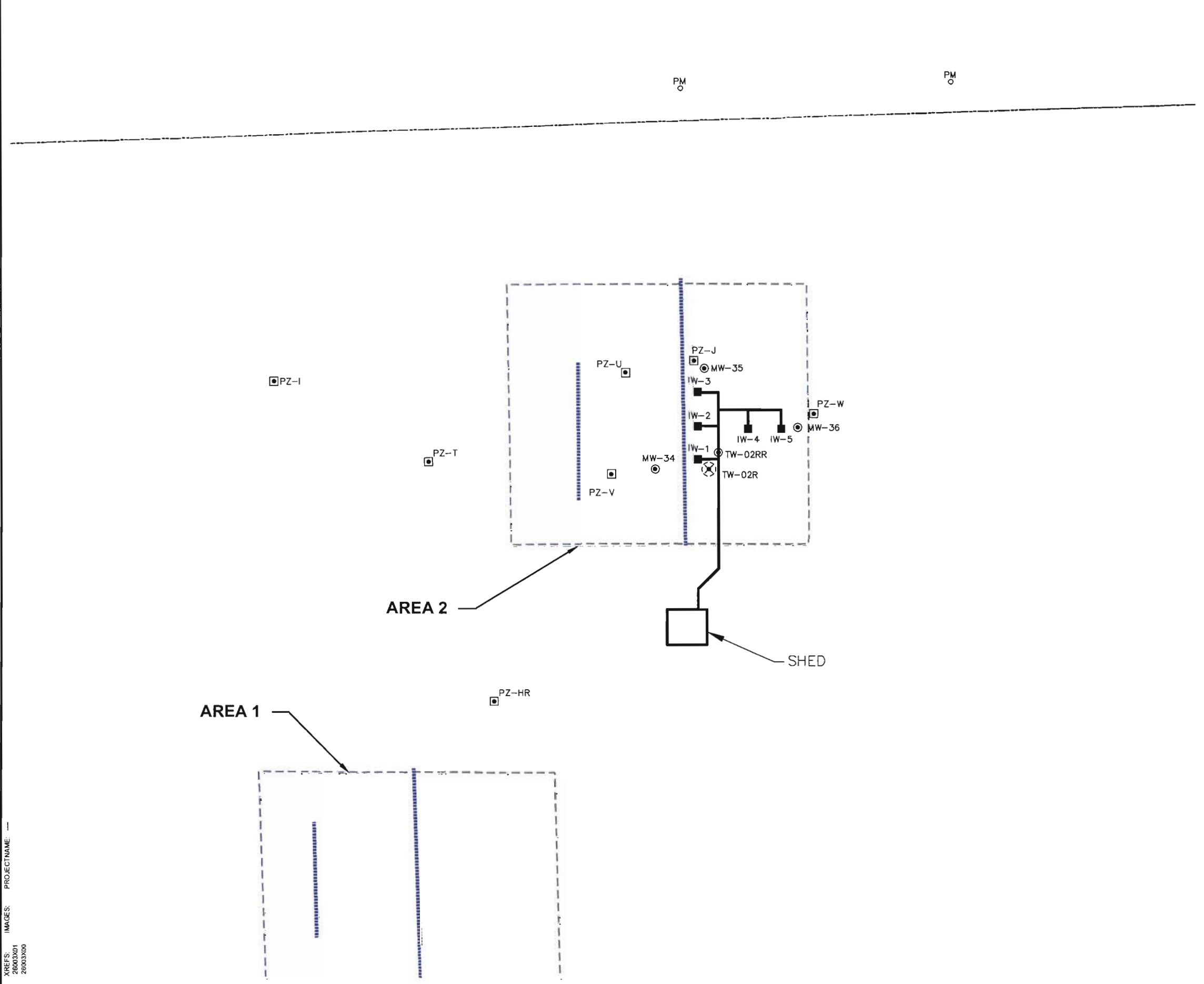
FORMER BEAR STREET FACILITY
SYRACUSE, NEW YORK
BIANNUAL PROCESS CONTROL MONITORING REPORT

SITE PLAN

ARCADIS

FIGURE 1



LEGEND:

- PROPERTY LINE
- PM — PETROLUEM PIPE LINE MARKER
- MW-19 — GROUNDWATER MONITORING WELL
- PZ-A — PIEZOMETER
- TW-02R — REMOVED GROUNDWATER MONITORING WELL
- IW-3 — OXYGEN INFUSION WELL
- APPROXIMATE BOUNDARY OF AREA
- GROUNDWATER INFILTRATION TRENCH
- PVC CONDUIT CARRYING POLYURETHANE TUBES

NOTES:

1. REPLACED MONITORING WELLS ARE IDENTIFIED WITH AN "R" (e.g., MW-24DR).
2. LOCATIONS ARE APPROXIMATE.

0 30' 60'

GRAPHIC SCALE

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OXYGEN INFUSION SYSTEM LAYOUT AREA 2

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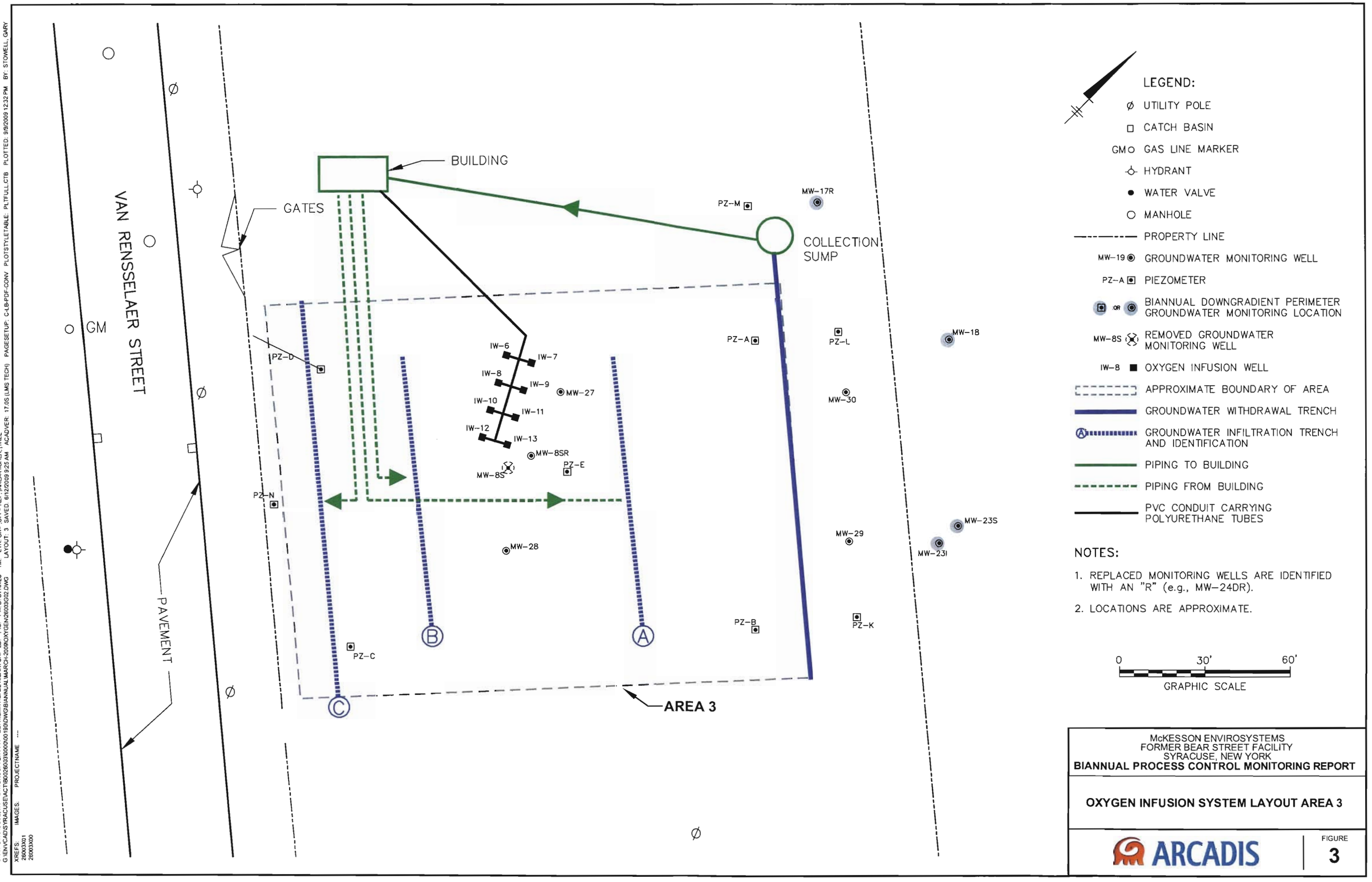
FIGURE
2



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26003X00

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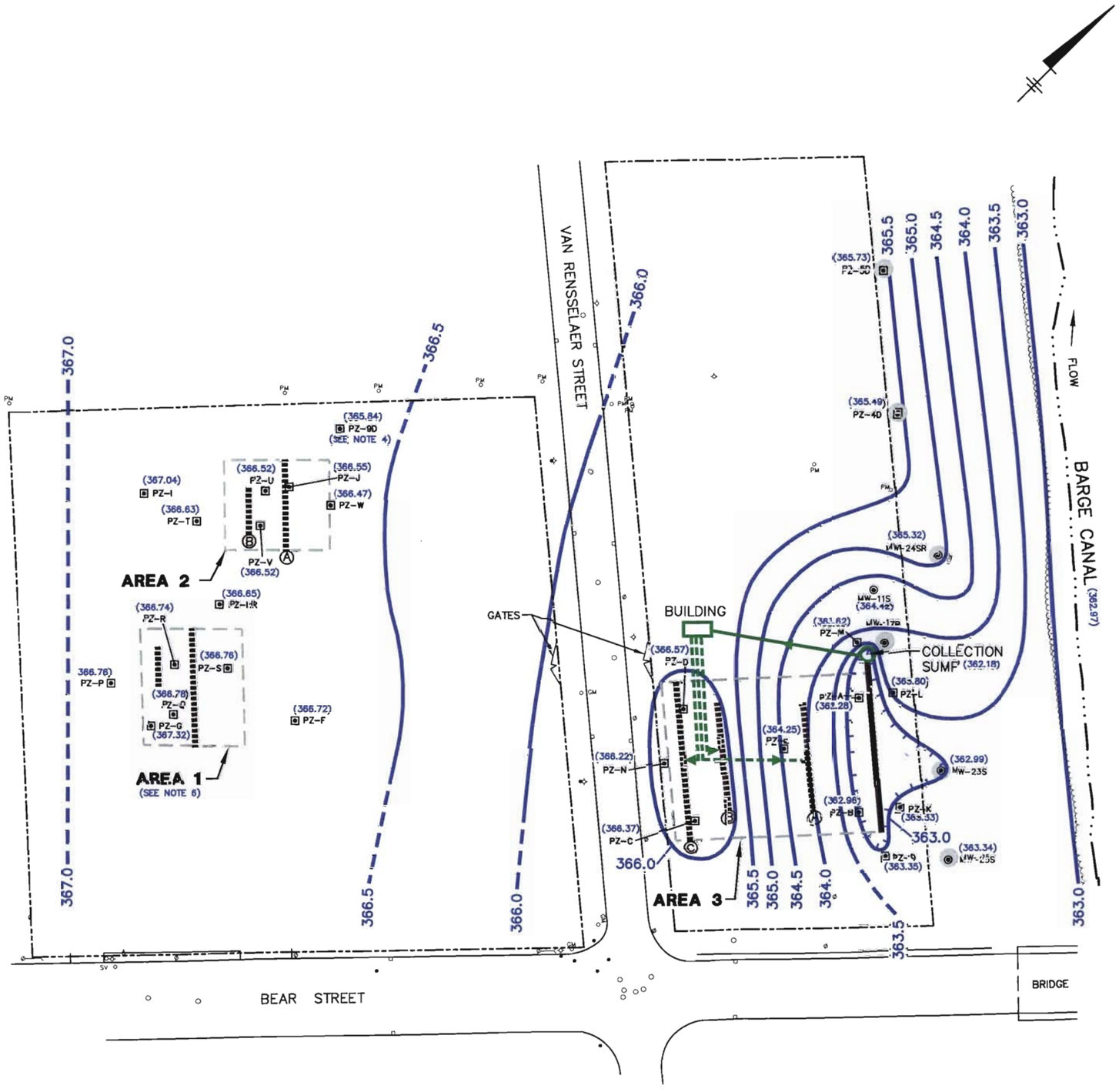
OXYGEN INFUSION SYSTEM LAYOUT AREA 3

ARCADIS

FIGURE
3



LEGEND:

- UTILITY POLE
- CATCH BASIN
- PETROLEUM PIPE LINE MARKER
- GAS LINE MARKER
- SEWER VENT
- HYDRANT
- WATER VALVE
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- TREE LINE
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- MW-19 — GROUNDWATER MONITORING WELL
- OR — BIANNUAL DOWNGRADIENT PERIMETER GROUNDWATER MONITORING LOCATION
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- APPROXIMATE BOUNDARY OF AREA
- GROUNDWATER WITHDRAWAL TRENCH
- A — GROUNDWATER INFILTRATION TRENCH AND IDENTIFICATION
- PIPING TO BUILDING
- 366.5 — POTENTIOMETRIC CONTOUR (FEET ABOVE MEAN SEA LEVEL) DASHED WHERE INFERRED
- CLOSED DEPRESSION
- (366.72) — GROUNDWATER ELEVATION (FEET ABOVE MEAN SEA LEVEL)

NOTES:

1. ONLY THE HYDRAULIC MONITORING LOCATIONS USED TO DRAW THIS MAP ARE SHOWN.
2. REPLACED MONITORING WELLS AND PIEZOMETERS ARE IDENTIFIED WITH AN "R" (e.g., MW-24DR).
3. ELEVATIONS REFERENCED TO THE NATIONAL GEODETIC VERTICAL DATUM OF 1929.
4. THE GROUNDWATER ELEVATION FOR PZ-9D WAS NOT USED WHEN CONSTRUCTING THIS MAP. REVIEW OF HISTORICAL WELL-CONSTRUCTION DATA SHOWS THAT THE SCREENED INTERVAL OF THIS PIEZOMETER IS DIFFERENT (DEEPER) THAN THE OTHER HYDRAULIC MONITORING POINTS IN THE AREA, AS SUCH, WATER LEVEL DATA COLLECTED FROM THIS PIEZOMETER MAY NOT BE REPRESENTATIVE OF CONDITIONS IN THE SHALLOW HYDROGEOLOGIC UNIT SAND LAYER.
5. THE BARGE CANAL ELEVATION WAS MEASURED FROM A MARKED POINT ON THE BEAR STREET BRIDGE.
6. TREATMENT SOLUTIONS WERE ADDED TO PIEZOMETERS PZ-G, PZ-Q, PZ-R, AND PZ-S ON 4/13/10. WATER LEVELS IN THESE PIEZOMETERS MAY NOT HAVE EQUILIBRATED BY THE DATE OF THESE READINGS; THEREFORE THEY WERE NOT USED WHEN CONSTRUCTING THIS MAP.

0 100' 200'

GRAPHIC SCALE

McKESSON ENVIROSYSTEMS
FORMER BEAR STREET FACILITY
SYRACUSE, NEW YORK
BIANNUAL PROCESS CONTROL MONITORING REPORT

POTENTIOMETRIC SURFACE OF THE SHALLOW HYDROGEOLOGIC UNIT SAND LAYER - APRIL 26, 2010

ARCADIS

FIGURE 4

TW-02RR

Date	9/06	11/06	6/07	8/07	11/07	3/08	8/08	3/09	6/09	9/09	4/10
Acetone	–	78 J	17	–	5.5	6.4	9.0	<10	–	<10	9.5 J
Benzene	–	4.9	5.5	–	5.8	4.5 J	4.4	5.0	–	4.3	4.1
Toluene	–	1.4 J	1.3 J	–	1.2 J	1.3 J	1.0 J	1.0	–	0.79 J	0.78 J
Ethylbenzene	–	2.2 J	4.0	–	3.0 J	3.8 J	2.3 J	1.5	–	1.2	1.2
Xylene	–	6.2	8.8	–	7.6	10	6.7	4.2	–	3.5	4.2
Methanol	–	<500	<500	–	<500 J	<500	<500	<500	–	1,000	<500
Trichloroethene	–	<1.0	<1.0	–	<1.0	<1.0	<1.0	<1.0	–	<1.0	<1.0
Aniline	7,600	2,100	6,800	4,000 J	3,700	7,500	9,600	2,000	2,800	1,600	2,800 J
N,N–dimethylaniline	<52	<10 J	<100	<20	<25	<50	<71	<10	<20	<10	<20 J
Methylene Chloride	–	<3.0	<3.0	–	<3.0	<3.0	<3.0	<1.0	–	<1.0	<1.0

MW-35

Date	11/06	6/07	11/07	3/08	8/08	3/09	9/09	4/10
Acetone	R	13	<5.0	<5.0 J	5.4	<10	6.5 J	<10 J
Benzene	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Toluene	<5.0	<5.0	<5.0	<5.0	<5.0	<1.0	0.16 J	<1.0
Ethylbenzene	<4.0	<4.0	<4.0	<4.0	<4.0	<1.0	<1.0	<1.0
Xylene	<5.0	<5.0	<5.0	<5.0	<5.0	<3.0	<3.0	<3.0
Methanol	<500	<500	<500 J	<500	<500	<500	1,100	<500
Trichloroethene	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Aniline	1.1	<5.0	<5.0	<5.0	1.1 J	<5.0	<5.0	<5.0
N,N–dimethylaniline	<1.0 J	<1.0	<0.5	<0.5	<0.5	<0.5	<1.0	<1.0
Methylene Chloride	<3.0	<3.0	<3.0	<3.0	<3.0	<1.0	<1.0	<1.0

MW-36

Date	9/06	11/06	6/07	8/07	11/07	3/08	8/08	3/09	6/09	9/09	4/10
Acetone	–	130 J	33	–	10	8.0 J	27	28	–	21	<10 J
Benzene	–	3.6	4.6	–	4.5	4.2	3.7	2.4	–	3.1	3.3
Toluene	–	1.2 J	1.4 J	–	1.7 J	1.5 J	1.4 J	0.8 J	–	0.96 J	1.1
Ethylbenzene	–	<4.0	0.8 J	–	0.9 J	0.8 J	0.6 J	<1.0	–	<1.0	0.26 J
Xylene	–	1.1 J	5.0	–	5.3	5.5	5.7	2.8 J	–	3.2	5.4
Methanol	–	<500	<500	–	<500 J	<500	<500	<500	–	<500	<500
Trichloroethene	–	<1.0	<1.0	–	<1.0	<1.0	<1.0	<1.0	–	<1.0	<1.0
Aniline	3.5	420	1,300	740	480 J	130	4.5 J	150	460	390	77
N,N–dimethylaniline	1.2	1.7 J	<10	<5.0	3.4 J	3.0	3.2	2.8	<5.0	3.1	2.6
Methylene Chloride	–	<3.0	<3.0	–	<3.0	<3.0	<3.0	<1.0	–	<1.0	<1.0

MW-34

Date	11/06	6/07	11/07	3/08	8/08	3/09	9/09	4/10
Acetone	49 J	22	<5.0	16	12	14	24	50 J
Benzene	<1.0	0.9 J	0.8 J	1.0 J	0.8 J	1.4	<1.0	0.82 J
Toluene	0.6 J	0.5 J	0.6 J	0.5 J	0.5 J	0.7 J	0.64 J	0.42 J
Ethylbenzene	<4.0	<4.0	<4.0	<4.0	<4.0	<1.0	<1.0	<1.0
Xylene	0.6 J	0.6 J	1.1 J	1.1 J	1.1 J	1.5 J	1.7 J	1.4 J
Methanol	<500	<500	<500 J	<500	<500	<500	1,000	<500
Trichloroethene	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Aniline	9.9	<5.0	0.3 J	24	0.6 J	12	<5.0	<5.0
N,N–dimethylaniline	1.2 J	<1.0	1.5	1.3	1.6	2.0	2.5	2.4
Methylene Chloride	<3.0	<3.0	<3.0	<3.0	<3.0	<1.0	<1.0	<1.0

TW-01

Date	11/06	6/07	11/07	3/08	8/08	3/09	9/09	4/10
Acetone	R	7.8	<5.0	<5.0 J	<5.0	<10	2.9 J	<10
Benzene	0.7 J	0.5 J	<1.0	<1.0	<1.0	1.9	<1.0	0.32 J
Toluene	<5.0	<5.0	<5.0	<5.0	<5.0	<1.0	0.11 J	<1.0
Ethylbenzene	<4.0	<4.0	<4.0	<4.0	<4.0	<1.0	<1.0	<1.0
Xylene	<5.0	<5.0	<5.0	<5.0	<5.0	0.8 J	<3.0	<3.0
Methanol	<500	<500	<500 J	<500	<500	22,300	970	<500
Trichloroethene	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Aniline	<1.0	<5.0	0.2 J	<5.0	<5.6	<5.0	<5.0	<5.0
N,N–dimethylaniline	<1.0 J	<1.0	1.1	1.0	<0.6	<0.5	1.1	1.0
Methylene Chloride	<3.0	<3.0	<3.0	<3.0	<3.0	<1.0	<1.0	<1.0

MW-31

Date	9/06	11/06	6/07	8/07	11/07	3/08	8/08	3/09	9/09	4/10
Acetone	–	R	<5.0	–	<5.0	<5.0 J	22	9.4 J	<10	<10
Benzene	–	6.9	14	–	12	2.0	13	8.3	10	4.8
Toluene	–	<5.0	0.7 J	–	<5.0	<5.0	0.4 J	0.6 J	0.49 J	0.40 J
Ethylbenzene	–	<4.0	<4.0	–	<4.0	<4.0	<4.0	<1.0	<1.0	<1.0
Xylene	–	<5.0	1.3 J	–	1.1 J	<5.0	2.2 J	0.8 J	2.0 J	1.3 J
Methanol	–	<500	<500	–	<500 J	<500	<500	<500	730	<500
Trichloroethene	–	<1.0	<1.0	–	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Aniline	1.6	0.4 J	<5.0	0.5 J	<5.0	0.2 J	<5.6	<5.0	<5.0	<5.0
N,N–dimethylaniline	3.4	1.1 J	2.0	2.7	2.3	1.6	2.4	2.3	2.5	2.3
Methylene Chloride	–	<3.0	<3.0	–	<3.0	<3.0	<3.0	<1.0	<1.0	<1.0

MW-9S

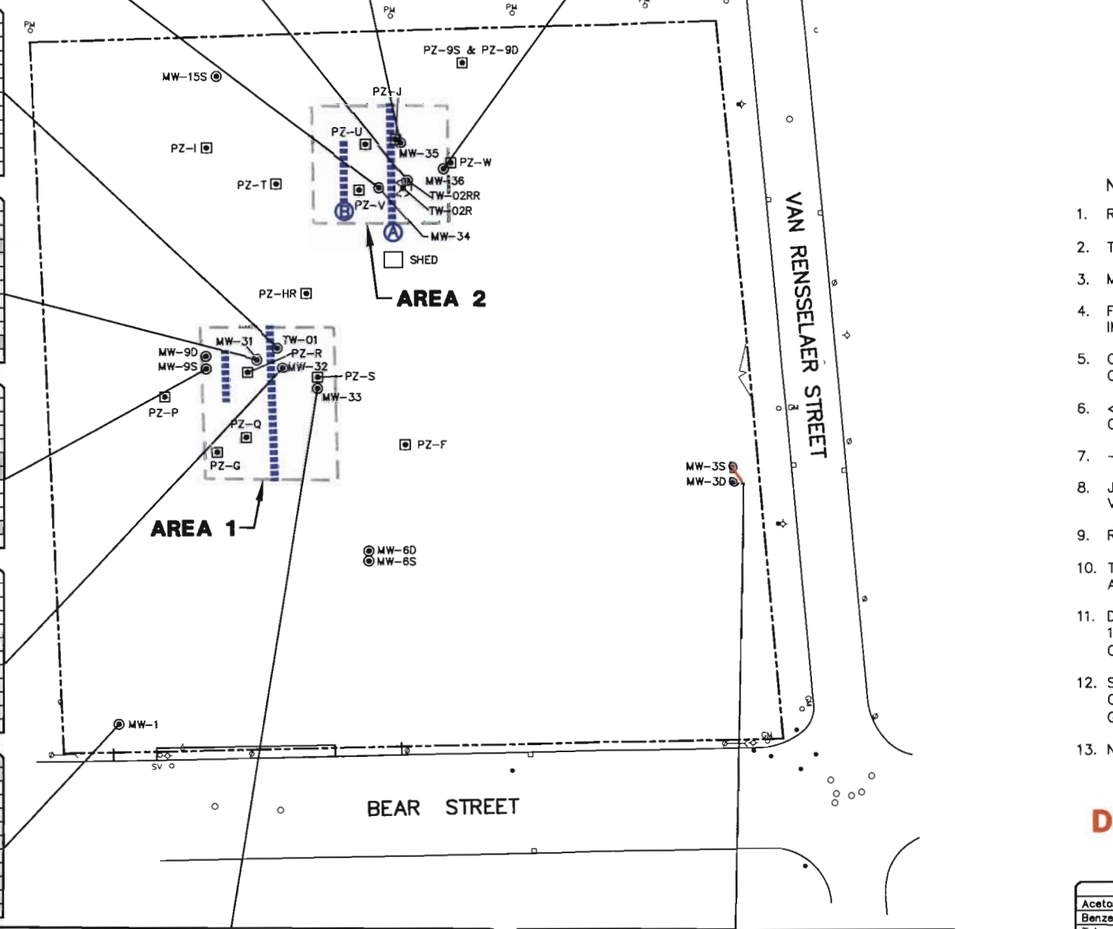
Date	11/06	6/07	11/07	3/08	8/08	3/09	9/09	4/10
Acetone	<5.0	<5.0	<5.0	<5.0 J	24	<10	<10	<10
Benzene	1.4	1.4	0.9 J	1.1	3.7	1.2	1.7	0.86 J
Toluene	3.5 J	3.3 J	2.0 J	3.0 J	3.3 J	2.5	2.2	2.1
Ethylbenzene	23	42	11	37	21	27	20	26
Xylene	63	110	58	73	72	85	70	69
Methanol	<500	<500	<500 J	<500	<500	<500	730	<500
Trichloroethene	<1.0	<1.0	<1.0	1.2	<1.0	<1.0	<1.0	<1.0
Aniline	0.5 J	<5.0	1.7 J	0.7 J	<5.5	<5.0	<5.0	<5.0
N,N–dimethylaniline	3.3 J	4.1	8.6	6.8	5.1	4.2	4.1	6.5
Methylene Chloride	<3.0	<3.0	<3.0	<3.0	<3.0	<1.0	<1.0	<1.0

MW-32

Date	11/06	6/07	11/07	3/08	8/08	3/09	9/09	4/10
Acetone	R	<5.0	<5.0	<5.0 J	5.8	<10	<10	<10
Benzene	<1.0	<1.0	<1.0	0.8 J	0.3 J	0.5 J	<1.0	0.23 J
Toluene	0.8 J	<5.0	<5.0	<5.0	<5.0	<1.0	<1.0	<1.0
Ethylbenzene	<4.0	<4.0	<4.0	<4.0	<4.0	<1.0	<1.0	<1.0
Xylene	<5.0	<5.0	<5.0	<5.0	<5.0	<3.0	<3.0	<3.0
Methanol	<500	<500	<500 J	<500	<500	<500	1,200	<500
Trichloroethene	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Aniline	<1.0	<5.0	0.1 J	<5.0	<5.7	<5.0	<5.0	<5.0
N,N–dimethylaniline	<1.0 J	<1.0	0.8	0.8	<0.6	<0.5	1.1	0.89 J
Methylene Chloride	<3.0	<3.0	<3.0	<3.0	<3.0	<1.0	<1.0	<1.0

MW-1

Date	11/06	6/07	11/07	3/08	8/08	3/09	9/09	4/10
Acetone	<5.0	<5.0	<5.0	<5.0 J	7.4	<10	8.9 J	<10
Benzene	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Toluene	<5.0	<5.0	<5.0	<5.0	<5.0	<1.0	<1.0	<1.0
Ethylbenzene	<4.0	<4.0	<4.0	<4.0	<4.0	<1.0	<1.0	<1.0
Xylene	<5.0	<5.0	<5.0	<5.0	<5.0	<3.0	<3.0	<3.0
Methanol	<500	<500	<500 J	<500	<500	<500	<500	<500
Trichloroethene	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Aniline	<1.0	<5.0	<5.0	<5.0	<5.6	<5.0	<5.0	<5.0
N,N–dimethylaniline	<1.0	<1.0	<0.5	<0.5	<0.6	<0.5	<1.0	<1.0
Methylene Chloride	<3.0	<3.0	<3.0	<3.0	<3.0	<1.0	<1.0	<1.0



MW-33

Date	9/06	11/06	6/07	8/07	11/07	3/08	8/08	3/09	9/09	4/10
Acetone	–	17 J	<5.0	–	<5.0	<5.0 J	<5.0	<10	<10	<10
Benzene	–	8.6	5.7	–	4.0	4.1	3.2	3.2	2.6	1.6
Toluene	–	0.7 J	0.4 J	–	<5.0	<5.0	<5.0	<1.0	0.20 J	<1.0
Ethylbenzene	–	<4.0	<4.0	–	<4.0	<4.0	<4.0	<1.0	<1.0	<1.0
Xylene	–	<5.0	<5.0	–	<5.0	<5.0	<5.0	<3.0	<3.0	<3.0
Methanol	–	<500	<500	–	<500 J	<500	<500	<500	<500	<500
Trichloroethene	–	<1.0	<1.0	–	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Aniline	940	84	46	48	0.1 J	<5.0	<5.9	<5.0	<5.0	<5.0
N,N–dimethylaniline	8.0	2.9 J	2.6	4.2	3.5	4.1	2.8	2.4	<1.0	2.0
Methylene Chloride	–	<3.0	<3.0	–	<3.0	<3.0	<3.0	<1.0	<1.0	<1.0

MW-3S

Date	11/06	6/07	11/07	3/08	8/08	3/09	9/09	4/10
Acetone	<5.0	<5.0	<5.0	<5.0	<5.0	<10	<10	<10
Benzene	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	0.17 J	<1.0
Toluene	<5.0	<5.0	<5.0	<5.0	<5.0	<1.0	<1.0	<1.0
Ethylbenzene	<4.0	<4.0	<4.0	<4.0	<4.0	<1.0	<1.0	<1.0
Xylene	<5.0	<5.0	<5.0	<5.0	<5.0	<3.0	<3.0	<3.0
Methanol	<500	<500	<500 J	<500	<500	<500	<500	<500
Trichloroethene	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Aniline	<1.0	<5.0	<5.0	<5.0	<5.6	<5.0	<5.0	<5.0
N,N–dimethylaniline	<1.0	<1.0	<0.5	<0.5	<0.6	<0.5	<1.0	<1.0
Methylene Chloride	<3.0	<3.0	<3.0	<3.0	<3.0	<1.0	<1.0	<1.0

LEGEND:

- UTILITY POLE
- CATCH BASIN
- PETROLEUM PIPE LINE MARKER
- GAS LINE MARKER
- SEWER VENT
- HYDRANT
- WATER VALVE
- MANHOLE
- PROPERTY LINE
- MW-19 GROUNDWATER MONITORING WELL
- PZ-A PIEZOMETER
- TW-02R REMOVED GROUNDWATER MONITORING WELL
- APPROXIMATE BOUNDARY OF AREA
- GROUNDWATER INFILTRATION TRENCH

SAMPLE IDENTIFICATION

MW-36

Date	9/06	11/06	6/07	8/07	11/07	3/08	8/08	3/09	6/09	9/09	4/10
Acetone	–	130 J	33	–	10	8.0 J	27	28	–	21	<10 J
Benzene	–	3.6	4.6	–	4.5	4.2	3.7	2.4	–	3.1	3.3
Toluene	–	1.2 J	1.4 J	–	1.7 J	1.5 J	1.4 J	0.8 J	–	0.96 J	1.1
Ethylbenzene	–	<4.0	0.8 J	–	0.9 J	0.8 J	0.6 J	<1.0	–	<1.0	0.26 J
Xylene	–	1.1 J	5.0	–	5.3	5.5	5.7	2.8 J	–	3.2	5.4
Methanol	–	<500	<500	–	<500 J	<500	<500	<500	–	<500	<500
Trichloroethene	–	<1.0	<1.0	–	<1.0	<1.0	<1.0	<1.0	–	<1.0	<1.0
Aniline	3.5	420	1,300	740	480 J	130	4.5 J	150	460	390	77
N,N–dimethylaniline	1.2	1.7 J	<10	<5.0	3.4 J	3.0	3.2	2.8	<5.0	3.1	2.6
Methylene Chloride	–	<3.0	<3.0	–	<3.0	<3.0	<3.0	<1.0	–	<1.0	<1.0

CONCENTRATION (ppb)

DETECTIONS EXCEEDING NYSDEC GROUNDWATER QUALITY STANDARDS ARE INDICATED BY SHADING.

NOTES:

1. REPLACED MONITORING WELLS ARE IDENTIFIED WITH AN "R" (e.g., MW–24DR).
2. TRENCH LOCATIONS ARE APPROXIMATE.
3. MONITORING LOCATIONS ARE APPROXIMATE.
4. FIGURE ONLY SHOWS COC CONCENTRATIONS AT MONITORING LOCATIONS WITHIN THE IMPACTED AREAS AND THE CHEMICAL PROCESS CONTROL MONITORING LOCATIONS.
5. ONLY COC CONCENTRATIONS DETECTED OR THAT HAVE BEEN DETECTED ARE PRESENTED ON THIS FIGURE (SEE ATTACHMENT A FIGURES 1 AND 3).
6. < = COMPOUND WAS ANALYZED FOR BUT NOT DETECTED. THE ASSOCIATED VALUE IS THE COMPOUND QUANTITATION LIMIT.
7. – = COMPOUND WAS NOT ANALYZED FOR IN THE SAMPLE.
8. J = THE COMPOUND WAS POSITIVELY IDENTIFIED; HOWEVER THE ASSOCIATED NUMERICAL VALUE IS AN ESTIMATED CONCENTRATION ONLY.
9. R = THE SAMPLE RESULT WAS REJECTED.
10. THE 9/06, 8/07 AND 6/09 SAMPLING EVENTS WERE INTERIM SAMPLING EVENTS, ANALYZING FOR ANILINE & N,N–DIMETHYLANILINE ONLY.
11. DATA VALUES FOR ANILINE AND N,N–DIMETHYLANILINE AT TW–02RR PRESENTED WITH THE 11/07 DATA ARE THE RESULTS OF SAMPLES COLLECTED IN 12/07. THE ORIGINAL SAMPLE COLLECTED IN 11/07 WAS DAMAGED AND HAD TO BE RESAMPLED.
12. SAMPLE DATA ARE COMPARED TO NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION GROUNDWATER QUALITY STANDARDS (GQS) (TECHNICAL AND OPERATIONAL GUIDANCE SERIES 1.1.1).
13. NA – STANDARD NOT AVAILABLE.

DRAFT

0 100' 200'

GRAPHIC SCALE

NYSDEC GQS	
Acetone	50
Benzene	1
Toluene	5
Ethylbenzene	5
Xylene	5
Methanol	NA
Trichloroethene	5
Aniline	5
N,N–dimethylaniline	1
Methylene Chloride	5

McKESSON ENVIROSYSTEMS
FORMER BEAR STREET FACILITY
SYRACUSE, NEW YORK
BIANNUAL PROCESS CONTROL MONITORING REPORT

GROUNDWATER MONITORING DATA SUMMARY FOR SEPTEMBER 2006 - APRIL 2010 AREAS 1 & 2 (AEROBIC TREATMENT)

ARCADIS

FIGURE 5

CITY: SYRACUSE, N.Y. DIVGROUP: ENVCAD-141 DB: N.SMITHGALL, R. ALLEN, L. FORAKER LD: PIC: D. ULM PM: D. PENNIMAN TM: D. PENNIMAN
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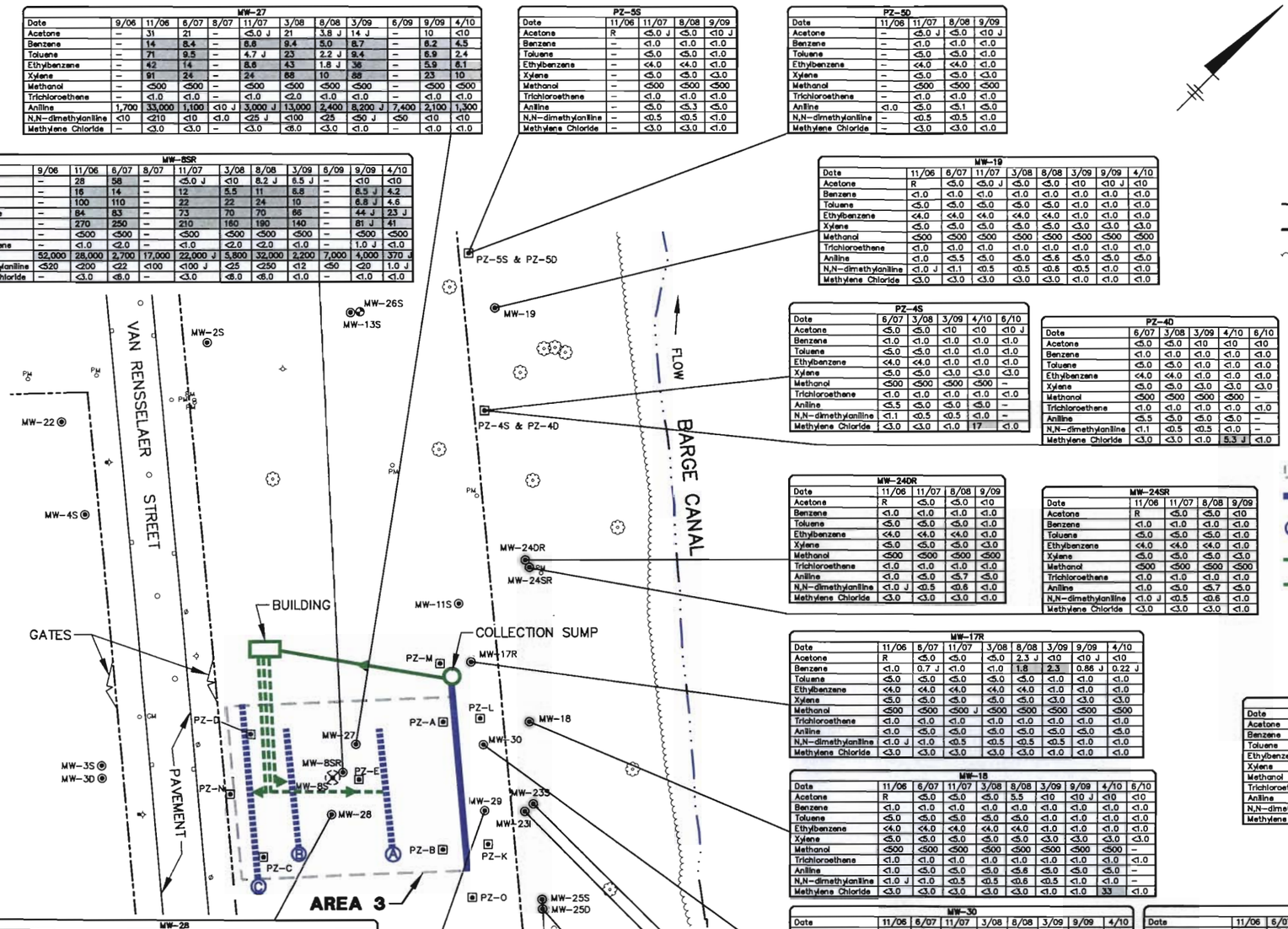

MW-27

Date	9/06	11/06	6/07	8/07	11/07	3/08	8/08	3/09	6/09	9/09	4/10
Acetone	–	31	21	–	<5.0 J	21	3.8 J	14 J	–	10	<10
Benzene	–	14	8.4	–	8.6	9.4	5.0	8.7	–	8.2	4.5
Toluene	–	71	9.5	–	4.7 J	23	2.2 J	9.4	–	6.9	2.4
Ethylbenzene	–	42	14	–	8.6	43	1.8 J	36	–	5.9	6.1
Xylene	–	91	24	–	24	88	10	88	–	23	10
Methanol	–	<500	<500	–	<500	<500	<500	<500	–	<500	<500
Trichloroethene	–	<1.0	<1.0	–	<1.0	<2.0	<1.0	<1.0	–	<1.0	<1.0
Aniline	1,700	33,000	1,100	<10 J	3,000 J	13,000	2,400	8,200 J	7,400	2,100	1,300
N,N–dimethylaniline	<10	<210	<10	<1.0	<25 J	<100	<25	<50 J	<50	<10	<10
Methylene Chloride	–	<3.0	<3.0	–	<3.0	<8.0	<3.0	<1.0	–	<1.0	<1.0

PZ–5S

Date	11/06	11/07	8/08	9/09
Acetone	R	<5.0 J	<5.0	<10 J
Benzene	–	<1.0	<1.0	<1.0
Toluene	–	<5.0	<5.0	<1.0
Ethylbenzene	–	<4.0	<4.0	<1.0
Xylene	–	<3.0	<3.0	<3.0
Methanol	–	<500	<500	<500
Trichloroethene	–	<1.0	<1.0	<1.0
Aniline	–	<5.0	<5.3	<5.0
N,N–dimethylaniline	–	<0.5	<0.5	<1.0
Methylene Chloride	–	<3.0	<3.0	<1.0

PZ–5D

Date	11/06	11/07	8/08	9/09
Acetone	–	<5.0 J	<5.0	<10 J
Benzene	–	<1.0	<1.0	<1.0
Toluene	–	<5.0	<5.0	<1.0
Ethylbenzene	–	<4.0	<4.0	<1.0
Xylene	–	<3.0	<3.0	<3.0
Methanol	–	<500	<500	<500
Trichloroethene	–	<1.0	<1.0	<1.0
Aniline	<1.0	<5.0	<5.1	<5.0
N,N–dimethylaniline	–	<0.5	<0.5	<1.0
Methylene Chloride	–	<3.0	<3.0	<1.0

MW–8SR

Date	9/06	11/06	6/07	8/07	11/07	3/08	8/08	3/09	6/09	9/09	4/10
Acetone	–	28	58	–	<5.0 J	<10	8.2 J	6.5 J	–	<10	<10
Benzene	–	16	14	–	12	5.5	11	8.8	–	8.5 J	4.2
Toluene	–	100	110	–	22	22	24	10	–	6.8 J	4.6
Ethylbenzene	–	84	83	–	73	70	70	66	–	44 J	23 J
Xylene	–	270	250	–	210	180	190	140	–	81 J	41
Methanol	–	<500	<500	–	<500	<500	<500	<500	–	<500	<500
Trichloroethene	–	<1.0	<2.0	–	<1.0	<2.0	<2.0	<1.0	–	1.0 J	<1.0
Aniline	52,000	28,000	2,700	17,000	22,000 J	5,800	32,000	2,200	7,000	4,000	370 J
N,N–dimethylaniline	<520	<200	<22	<100	<100 J	<25	<250	<12	<50	<20	1.0 J
Methylene Chloride	–	<3.0	<8.0	–	<3.0	<8.0	<8.0	<1.0	–	<1.0	<1.0

MW–19

Date	11/06	6/07	11/07	3/08	8/08	3/09	9/09	4/10
Acetone	R	<5.0	<5.0 J	<5.0	<5.0	<10	<10 J	<10
Benzene	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Toluene	<5.0	<5.0	<5.0	<5.0	<5.0	<1.0	<1.0	<1.0
Ethylbenzene	<4.0	<4.0	<4.0	<4.0	<4.0	<1.0	<1.0	<1.0
Xylene	<5.0	<5.0	<5.0	<5.0	<5.0	<3.0	<3.0	<3.0
Methanol	<500	<500	<500	<500	<500	<500	<500	<500
Trichloroethene	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Aniline	<1.0	<5.0	<5.0	<5.0	<5.6	<5.0	<5.0	<5.0
N,N–dimethylaniline	<1.0 J	<1.1	<0.5	<0.5	<0.6	<0.5	<1.0	<1.0
Methylene Chloride	<3.0	<3.0	<3.0	<3.0	<3.0	<1.0	<1.0	<1.0

PZ–4S

Date	6/07	3/08	3/09	4/10	8/10
Acetone	<5.0	<5.0	<10	<10	<10 J
Benzene	<1.0	<1.0	<1.0	<1.0	<1.0
Toluene	<5.0	<5.0	<1.0	<1.0	<1.0
Ethylbenzene	<4.0	<4.0	<1.0	<1.0	<1.0
Xylene	<5.0	<5.0	<3.0	<3.0	<3.0
Methanol	<500	<500	<500	<500	–
Trichloroethene	<1.0	<1.0	<1.0	<1.0	<1.0
Aniline	<5.5	<5.0	<5.0	<5.0	–
N,N–dimethylaniline	<1.1	<0.5	<0.5	<1.0	–
Methylene Chloride	<3.0	<3.0	<1.0	17	<1.0

PZ–4D

Date	6/07	3/08	3/09	4/10	8/10
Acetone	<5.0	<5.0	<10	<10	<10
Benzene	<1.0	<1.0	<1.0	<1.0	<1.0
Toluene	<5.0	<5.0	<1.0	<1.0	<1.0
Ethylbenzene	<4.0	<4.0	<1.0	<1.0	<1.0
Xylene	<5.0	<5.0	<3.0	<3.0	<3.0
Methanol	<500	<500	<500	<500	–
Trichloroethene	<1.0	<1.0	<1.0	<1.0	<1.0
Aniline	<5.5	<5.0	<5.0	<5.0	–
N,N–dimethylaniline	<1.1	<0.5	<0.5	<1.0	–
Methylene Chloride	<3.0	<3.0	<1.0	5.3 J	<1.0

MW–24DR

Date	11/06	11/07	8/08	9/09
Acetone	R	<5.0	<5.0	<10
Benzene	<1.0	<1.0	<1.0	<1.0
Toluene	<5.0	<5.0	<5.0	<1.0
Ethylbenzene	<4.0	<4.0	<4.0	<1.0
Xylene	<5.0	<5.0	<5.0	<3.0
Methanol	<500	<500	<500	<500
Trichloroethene	<1.0	<1.0	<1.0	<1.0
Aniline	<1.0	<5.0	<5.7	<5.0
N,N–dimethylaniline	<1.0 J	<0.5	<0.6	<1.0
Methylene Chloride	<3.0	<3.0	<3.0	<1.0

MW–24SR

Date	11/06	11/07	8/08	9/09
Acetone	R	<5.0	<5.0	<10
Benzene	<1.0	<1.0	<1.0	<1.0
Toluene	<5.0	<5.0	<5.0	<1.0
Ethylbenzene	<4.0	<4.0	<4.0	<1.0
Xylene	<5.0	<5.0	<5.0	<3.0
Methanol	<500	<500	<500	<500
Trichloroethene	<1.0	<1.0	<1.0	<1.0
Aniline	<1.0	<5.0	<5.7	<5.0
N,N–dimethylaniline	<1.0 J	<0.5	<0.6	<1.0
Methylene Chloride	<3.0	<3.0	<3.0	<1.0

MW–17R

Date	11/06	6/07	11/07	3/08	8/08	3/09	9/09	4/10
Acetone	R	<5.0	<5.0	<5.0	2.3 J	<10	<10 J	<10
Benzene	<1.0	0.7 J	<1.0	<1.0	1.8	2.3	0.86 J	0.22 J
Toluene	<5.0	<5.0	<5.0	<5.0	<5.0	<1.0	<1.0	<1.0
Ethylbenzene	<4.0	<4.0	<4.0	<4.0	<4.0	<1.0	<1.0	<1.0
Xylene	<5.0	<5.0	<5.0	<5.0	<5.0	<3.0	<3.0	<3.0
Methanol	<500	<500	<500 J	<500	<500	<500	<500	<500
Trichloroethene	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Aniline	<1.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
N,N–dimethylaniline	<1.0 J	<1.0	<0.5	<0.5	<0.5	<1.0	<1.0	<1.0
Methylene Chloride	<3.0	<3.0	<3.0	<3.0	<3.0	<1.0	<1.0	<1.0

MW–18

Date	11/06	6/07	11/07	3/08	8/08	3/09	9/09	4/10	6/10
Acetone	R	<5.0	<5.0	<5.0	5.5	<10	<10 J	<10	<10
Benzene	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Toluene	<5.0	<5.0	<5.0	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0
Ethylbenzene	<4.0	<4.0	<4.0	<4.0	<4.0	<1.0	<1.0	<1.0	<1.0
Xylene	<5.0	<5.0	<5.0	<5.0	<5.0	<3.0	<3.0	<3.0	<3.0
Methanol	<500	<500	<500	<500	<500	<500	<500	<500	–
Trichloroethene	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Aniline	<1.0	<5.0	<5.0	<5.0	<5.6	<5.0	<5.0	<5.0	–
N,N–dimethylaniline	<1.0 J	<1.0	<0.5	<0.5	<0.6	<0.5	<1.0	<1.0	–
Methylene Chloride	<3.0	<3.0	<3.0	<3.0	<3.0	<1.0	<1.0	33	<1.0

MW–30

Date	11/06	6/07	11/07	3/08	8/08	3/09	9/09	4/10
Acetone	11	<5.0	<5.0 J	<5.0	<5.0	<10	<10	<10
Benzene	1.0	<1.0	0.8 J	0.6 J	0.7 J	0.8 J	0.78 J	<1.0
Toluene	<5.0	<5.0	<5.0	<5.0	<5.0	<1.0	0.17 J	<1.0
Ethylbenzene	<4.0	<4.0	<4.0	<4.0	<4.0	<1.0	<1.0	<1.0
Xylene	<5.0	<5.0	<5.0	0.2 J	<5.0	<3.0	<3.0	<3.0
Methanol	<500	<500	<500	<500	<500	<500	<500	<500
Trichloroethene	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Aniline	200	30	49	3.0 J	37	<5.0	21	<5.0
N,N–dimethylaniline	<1.0	<1.1	<0.5	0.7	<0.5	<0.5	<1.0	<1.0
Methylene Chloride	<3.0	<3.0	<3.0	<3.0	<3.0	<1.0	<1.0	<1.0

MW–23S

Date	11/06	6/07	11/07	3/08	8/08	3/09	9/09	4/10
Acetone	R	<5.0	<5.0	<5.0	<5.0	<10	<10 J	<10
Benzene	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Toluene	<5.0	<5.0	<5.0	<5.0	<5.0	<1.0	<1.0	<1.0
Ethylbenzene	<4.0	<4.0	<4.0	<4.0	<4.0	<1.0	<1.0	<1.0
Xylene	<5.0	<5.0	<5.0	<5.0	<5.0	<3.0	<3.0	<3.0
Methanol	<500	<500	<500	<500	<500	<500	<500	<500
Trichloroethene	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Aniline	<1.0	<5.0	<5.0	<5.0	<5.6	<5.0	<5.0	<5.0
N,N–dimethylaniline	<1.0 J	<1.0	<0.5	<0.5	<0.6	<0.5	<1.0	<1.0
Methylene Chloride	<3.0	<3.0	<3.0	<3.0	<3.0	<1.0	<1.0	<1.0

MW–28

Date	9/06	11/06	6/07	8/07	11/07	3/08	8/08	3/09	9/09	4/10
Acetone	–	12	1.3	–	<5.0 J	<5.0	<5.0	<10	<10	<10
Benzene	–	8.2	4.6	–	4.5	4.0	3.8	3.5	3.1	2.8
Toluene	–	1.4 J	0.4 J	–	0.5 J	0.5 J	<5.0	0.3 J	0.25 J	0.23 J
Ethylbenzene	–	5.6	0.8 J	–	1.4 J	1.6 J	<4.0	0.8 J	0.32 J	0.60 J
Xylene	–	4.4 J	0.6 J	–	0.8 J	1.3 J	<5.0	1.1 J	0.48 J	0.46 J
Methanol	–	<500	<500	–	<500	<500	<500	851	<500	<500
Trichloroethene	–	<1.0	<1.0	–	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Aniline	280	1,000	80	40	29	81	0.7 J	18	8.7	<5.0
N,N–dimethylaniline	<2.2	<5.2	<1.0	<1.0	<0.5 J	0.9	<0.5	<0.5	<1.0	0.49 J
Methylene Chloride	–	<3.0	<3.0	–	<3.0	<3.0	<3.0	<1.0	<1.0	<1.0

MW–29

Date	11/06	6/07	11/07	3/08	8/08	3/09	9/09	4/10
Acetone	5.4	<5.0	<5.0 J	<5.0	<5.0	<10	<10	<10
Benzene	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Toluene	<5.0	<5.0	<5.0	<5.0	<5.0	<1.0	0.16 J	<1.0
Ethylbenzene	<4.0	<4.0	<4.0	<4.0	<4.0	<1.0	<1.0	<1.0
Xylene	<5.0	0.5 J	<5.0	<5.0	<5.0	<3.0	<3.0	<3.0
Methanol	<500	<500	<500	<500	<500	<500	<500	<500
Trichloroethene	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Aniline	0.4 J	<5.5	<5.0 J	<5.0	<5.0	<5.0	<5.0	<5.0
N,N–dimethylaniline	<1.0	<1.1	<0.5 J	<0.5	<0.5	0.25	0.29 J	<1.0
Methylene Chloride	<3.0	<3.0	<3.0	<3.0	<3.0	<1.0	<1.0	<1.0

MW–25S

Date	11/06	6/07	11/07	3/08	8/08	3/09	9/09	4/10
Acetone	R	<5.0	<5.0	<5.0	<5.0	<10	<10 J	<10
Benzene	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Toluene	<5.0	<5.0	<5.0	<5.0	<5.0	<1.0	<1.0	<1.0
Ethylbenzene	<4.0	<4.0	<4.0	<4.0	<4.0	<1.0	<1.0	<1.0
Xylene	<5.0	<5.0	<5.0	<5.0	<5.0	<3.0	<3.0	<3.0
Methanol	<500	<500	<500	<500	<500	<500	<500	<500
Trichloroethene	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Aniline	<1.0	<5.0	<5.0	<5.0	<5.2	<5.0	<5.0	<5.0
N,N–dimethylaniline	<1.0 J	<1.0	<0.5	<0.5	<0.5	<1.0	<1.0	<1.0
Methylene Chloride	<3.0	<3.0	<3.0	<3.0	<3.0	<1.0	<1.0	<1.0

MW–25D

Date	6/07	3/08	3/09	4/10
Acetone	12 J	<5.0	<10	<10
Benzene	<1.0	<1.0	<1.0	<1.0
Toluene	<5.0	<5.0	<1.0	<1.0
Ethylbenzene	<4.0	<4.0	<1.0	<1.0
Xylene	<5.0	<5.0	<3.0	<3.0
Methanol	<500	<500	<500	<500
Trichloroethene	<1.0	<1.0	<1.0	<1.0
Aniline	<5.0	<5.0	<5.0	<5.0
N,N–dimethylaniline	<1.0	<0.5	<0.5	<1.0
Methylene Chloride	<3.0	<3.0	<1.0	<1.0

MW–23I

Date	11/06	6/07	11/07	3/08	8/08	3/09	9/09	4/10	6/10
Acetone	R	<5.0	<5.0	<5.0	<5.0	<10	<10 J	<10	<10
Benzene	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Toluene	<5.0	<5.0	<5.0	<5.0	<5.0	<1.0	<1.0	<1.0	<1.0
Ethylbenzene	<4.0	<4.0	<4.0	<4.0	<4.0	<1.0	<1.0	<1.0	<1.0
Xylene	<5.0	<5.0	<5.0	<5.0	<5.0	<3.0	<3.0	<3.0	<3.0
Methanol	<500	<500	<500	<500	<500	<500	<500	<500	–
Trichloroethene	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Aniline	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	–
N,N–dimethylaniline	<1.0 J	<1.0	<0.5	<0.5	<0.5	<0.5	<1.0	<1.0	–
Methylene Chloride	<3.0	<3.0	<3.0	<3.0	<3.0	<1.0	<1.0	8.4	<1.0

LEGEND:

- UTILITY POLE
- CATCH BASIN
- PMO PETROLEUM PIPE LINE MARKER
- GMO GAS LINE MARKER
- HYDRANT
- WATER VALVE
- MANHOLE
- PROPERTY LINE
- EDGE OF WATER
- EDGE OF TREELINE
- TREE
- MW–19 GROUNDWATER MONITORING WELL
- PZ–A PIEZOMETER
- OR BIANNUAL DOWNGRADIENT PERIMETER GROUNDWATER MONITORING LOCATION
- MW–26S PUMPING WELL
- MW–8S REMOVED GROUNDWATER MONITORING WELL
- APPROXIMATE BOUNDARY OF AREA
- GROUNDWATER WITHDRAWAL TRENCH
- GROUNDWATER INFILTRATION TRENCH AND IDENTIFICATION
- PIPING TO BUILDING
- PIPING FROM BUILDING

NOTES:

1. REPLACED MONITORING WELLS ARE IDENTIFIED WITH AN "R" (e.g., MW–24DR).
2. TRENCH LOCATIONS ARE APPROXIMATE.
3. MONITORING LOCATIONS ARE APPROXIMATE.
4. FIGURE ONLY SHOWS COC CONCENTRATIONS AT MONITORING LOCATIONS WITHIN THE IMPACTED AREAS AND THE CHEMICAL PROCESS CONTROL MONITORING LOCATIONS.
5. ONLY COC CONCENTRATIONS DETECTED OR HAVE BEEN DETECTED ARE PRESENTED ON THIS FIGURE (SEE ATTACHMENT A FIGURES 2 AND 4).
6. < = COMPOUND WAS ANALYZED FOR BUT NOT DETECTED. THE ASSOCIATED VALUE IS THE COMPOUND QUANTITATION LIMIT.
7. – = COMPOUND WAS NOT ANALYZED FOR IN THE SAMPLE.
8. J = THE COMPOUND WAS POSITIVELY IDENTIFIED; HOWEVER THE ASSOCIATED NUMERICAL VALUE IS AN ESTIMATED CONCENTRATION ONLY.
9. R = THE SAMPLE RESULT WAS REJECTED.
10. THE 9/06, 8/07 AND 6/09 SAMPLING EVENTS WERE INTERIM SAMPLING EVENTS, ANALYZING FOR ANILINE & N,N–DIMETHYLANILINE ONLY. THE 6/10 SAMPLING EVENT WAS AN INTERIM SAMPLING EVENT ANALYZING FOR VOLATILE ORGANIC COMPOUNDS ONLY.
11. SAMPLE DATA ARE COMPARED TO NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION (NYSDEC) GROUNDWATER QUALITY STANDARDS (GQS) (TECHNICAL AND OPERATIONAL GUIDANCE SERIES 1.1.1).
12. NA – STANDARD NOT AVAILABLE.

SAMPLE IDENTIFICATION

MW–28

Date	9/06	11/06	6/07	8/07	11/07	3/08	8/08	3/09	9/09	4/10
Acetone	–	12	1.3	–	<5.0 J	<5.0	<5.0	<10	<10	<10
Benzene	–	8.2	4.6	–	4.5	4.0	3.8	3.5	3.1	2.8
Toluene	–	1.4 J	0.4 J	–	0.5 J	0.5 J	<5.0	0.3 J	0.25 J	0.23 J
Ethylbenzene	–	5.6	0.8 J	–	1.4 J	1.6 J	<4.0	0.8 J	0.32 J	0.60 J
Xylene	–	4.4 J	0.8 J	–	0.8 J	1.3 J	<5.0	1.1 J	0.48 J	0.46 J
Methanol	–	<500	<500	–	<500	<500	<500	851	<500	<500
Trichloroethene	–	<1.0	<1.0	–	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Aniline	280	1,000	80	40	29	81	0.7 J	18	8.7	<5.0
N,N–dimethylaniline	<2.2	<5.2	<1.0	<1.0	<0.5 J	0.9	<0.5	<0.5	<1.0	0.49 J
Methylene Chloride	–	<3.0	<3.0	–	<3.0	<3.0	<3.0	<1.0	<1.0	<1.0

DETECTIONS EXCEEDING NYSDEC GROUNDWATER QUALITY STANDARDS ARE INDICATED BY SHADING.

CONCENTRATION (ppb)

NYSDEC GQS	
Acetone	50
Benzene	1
Toluene	5
Ethylbenzene	5
Xylene	5
Methanol	NA
Trichloroethene	5
Aniline	5
N,N–dimethylaniline	1
Methylene Chloride	5

DRAFT

0 100' 200'

GRAPHIC SCALE

McKESSON ENVIROSYSTEMS
FORMER BEAR STREET FACILITY
SYRACUSE, NEW YORK
BIANNUAL PROCESS CONTROL MONITORING REPORT

GROUNDWATER MONITORING DATA SUMMARY FOR SEPTEMBER 2006 - APRIL 2010 AREA 3 (AEROBIC TREATMENT)

ARCADIS

FIGURE 6

CITY: SYRACUSE, N.Y. DIV/GROUP: ENVCAD-141 DB: N.SMITHGALL R. ALLEN, L. FORAKER LD: PIC: D. ULM PM: D. PENNIMAN TM: D. PENNIMAN LYR: ON=*;OFF=*REF
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Attachment A

Table 1. Summary of Historical Groundwater Monitoring Data

Table 2. Summary of Historical Groundwater Level Measurements

Figures 1 – 4.
Groundwater Monitoring Data Summaries

Table 1. Summary of Historical Groundwater Monitoring Data, March 1988 through June 2006,
2010 Biannual Process Control Monitoring Report, McKesson Envirosystems, Former Bear Street Facility, Syracuse, New York

Monitoring Well	Sampling Date	Screen Elev. (ft. AMSL) Top	Bottom	Acetone	Benzene	Toluene	Ethyl-benzene	Xylene[A]	Methanol	Trichloro-ethene	Aniline	N,N-Dimethyl-aniline	Methylene Chloride
NYSDEC Groundwater Quality Standards (Part 700)				50	1	5	5	5	NA	5	5	1	5
MW-1	3/88	370.3	355.3	<100	<1	<1	<1	<1	<1,000	<1	<10	<10	<1
	1/89			<100	<1	<1	<1	<1	<1,000	<1	<11	<11	<1
	11/89			<100	<1	<1	<1	<1	<1,000	<1	<10	<10	<1
	11/90			<100	<1	<1	<1	<3	<1,000	<1	<10	<10	<1
	11/91			<100	<1	<1	<1	<3	<1,000	<1	<10	<10	<1
	11/92			<100	<1	<1	<1	<3	<1,000	<1	<10	<10	<1
	8/95			<1,000	<5	<5	<5	<5	<1,000	<5	<5	<10	<10
	9/98			<10	<10	<10	<10	<10	<1,000	<10	<10	<10	<10
	7/99			0.7 JN	<10	<10	<10	<10	<1,000	<10	<10	<10	<10
	3/00			<10	<10	<10	<10	<10	<1,000 J	<10	<5	<10	<10
	9/00			8 J	<10 J	3 J	<10 J	5.0 J	<1,000	<10 J	<10 J	<10	<10 J
	3/01			<10	<10	<10	<10	<10	<1,000	<10	<10	<10	10
	9/01			<10	<10	<10	<10	<10	<1,000 J	<10	<10	<10	<10
	4/02			<12	<5.0	<5.0	<5.0	<10	990 J	<5	<5	<5	<5
	10/02			<25	<10	<10	<10	<20	<1,000	<10	<5	R	<10
	5/03			<12	<5	<5	<5	<10	<1,000	<5	<5	<5	<5
	10/03			<12	<5	<5	<5	<10	<1,000	<5	2 J	<5	<5
	6/04			<25	<10	<10	<10	<20	<1,000	<10	<5	<5	<10
	11/04			--	--	--	--	--	<1,000	--	<5	<5	--
	6/05			<5.0 J	<1.0	<5.0	<4.0	<5.0	<1,000	<1.0	0.2 J	<1.0	<3.0
	11/05			<1.3 J	<0.3	<0.4	<0.5	<0.5	<1,000	<0.4	<1.0	<1.0 J	<0.5
	6/06			<5.0 J	<1.0 J	<5.0 J	<4.0 J	<5.0 J	<1,000 J	<1.0 J	<1.0 J	<1.0 J	<3.0 J
MW-2S	3/88	368.1	353.1	<1,000	1,900	110	610	2,800	<1,000	<10	<10	<10	<10
	1/89			<1,000	2,000	65	330	1,200	<1,000	<10	<11	<11	<10
	11/89			<1,000	1,800	<100	360	810	38,000	<100	<100	<100	<100
MW-3S	3/88	365.1	350.1	<100	<1	<1	<1	<1	<1,000	50	<10	<10	110
	1/89			<10,000	<100	120	<100	<100	<1,000	1,100	<11	5,670	4,700
	11/89			<10,000	<100	<100	<100	<100	<1,000	100	<52	440	2,700
	11/91			2,900	10	10	4.0	31	<1,000	<10	790	170	<10
	8/95			<1,000	<5	<5	<5	<5	<1,000	<5.0	15	2.0 J	<10
	9/98			<10	<10	<10	<10	<10	<1,000	<10	<10	<10	<10
	7/99			<10	1 J	0.7 J	<10	<10	<1,000	<10	9 J	<10	<10
	3/00			<10 J	<10	<10	<10	<10	<1,000 J	<10	<10	<10	<10
	9/00			<10 J	1 J	2 J	<10 J	<10 J	<1,000	<10 J	2 J	1 J	<10 J
	3/01			<10	<10	<10	<10	<10	<1,000	<10	<10	<10	<10
	9/01			<10	3 J	8 J	1 J	2 J	<1,000 J	<10	690 D (69)[B]	4 J	<10
	4/02			<12	<5	<5	<5	<10	370 J	<5.0	1.7 J	<5	<5
	10/02			<25	<10	<10	<10	<20	<1,000	<10	<5	R	<10
	5/03			<12	<5	<5	<5	<10	<1,000	<5	<5	<5	<5
	10/03			<12	<5	<5	<5	<10	<1,000	<5	4 J	<5	<5
	6/04			6.0 J	<10	<10	<10	<20	<1,000	<10	0.8 J	<6	<10

See notes on page 15.

Table 1. Summary of Historical Groundwater Monitoring Data, March 1988 through June 2006,
2010 Biannual Process Control Monitoring Report, McKesson Envirosystems, Former Bear Street Facility, Syracuse, New York

Monitoring Well	Sampling Date	Screen Elev. (ft. AMSL) Top	Bottom	Acetone	Benzene	Toluene	Ethyl-benzene	Xylene[A]	Methanol	Trichloro-ethene	Aniline	N,N-Dimethyl-aniline	Methylene Chloride
NYSDEC Groundwater Quality Standards (Part 700)				50	1	5	5	5	NA	5	5	1	5
MW-3S	11/04			<25	<10	<10	<10	<20	150 J	<10	4 J	<5.0	<10
(cont'd)	6/05			<5.0 J	<1.0	<5.0	<4.0	<5.0	<1,000	<1.0	15	<1.0	<3.0
	11/05			<1.3 J	<0.3	<0.4	<0.5	<0.4	<1,000	<0.4	<1.0	<1.0 J	<0.5
	6/06			<5.0	<1.0	<5.0	<4.0	<5.0	<1,000	<1.0	<1.0	<1.0	<3.0
MW-3D	8/95	343.8	339	<1,000	<25 D	<25 D	<25 D	<25 D	<1,000	<25 D	1 J	5 J	200 D
MW-4S	3/88	365.5	350.5	<100	<1	<1	<1	<1	<1,000	<1	<10	<10	<1
	1/89			<100	<1	<1	<1	<1	<1,000	<1	<11	19	280
	11/89			<100	<1	<1	<1	<1	<1,000	<1	<10	<10	<1
MW-5[C]	3/88	363.3	348.3	<100	<1	<1	<1	<1	<1,000	<1	230	130	<1
	1/89			<100	<1	<1	<1	<1	<1,000	<1	34	<11	<1
	11/89			<100	<1	<1	<1	<1	<1,000	<1	17	<10	<1
MW-6[D]	1/89	365.5	355.9	<100	<1	<1	<1	<1	<1,000	<1	<11	<11	<1
(Replaced by MW-6S)	11/89			<10	<1	<1	<1	<1	<1,000	<1	<10	<10	<1
	8/95			<1,000	<5	<5	<5	<5	<1,000	<5	<5	<10	<10
MW-7[D]	1/89	367	357.4	<100	<1	<1	<1	2	<1,000	<1	<11	<11	100
	11/89			<100	<1	<1	<1	<1	<1,000	<1	<10	<10	<1
MW-8[D]	1/89	364.7	355.1	<1,000,000	<10,000	<10,000	<10,000	<10,000	430,000	<10,000	2,900	24,000	3,200,000
(Replaced by MW-8S)[E]	11/89			470,000	<10,000	<10,000	<10,000	<10,000	300,000	<10,000	8,500	52,000	2,800,000
	11/91			<1,000,000	<10,000	<10,000	<10,000	<30,000	150,000	<10,000	8,000	33,000	1,600,000
	8/95			<1,000	<250,000D	<250,000D	<250,000D	<250,000D	22,000	60,000 JD	<25,000D	380,000 D	7,700,000 D
	9/98			<10,000 J	<10,000	<10,000	<10,000	<10,000	7,900	3,300 J	1,200 J	26,000 D	140,000
	2/99			<20,000	<20,000	<20,000	<20,000	<20,000	16,000JN	11,000 J	30,000 D	120,000 D	650,000 DB
	7/99			10 J	22 J	240 J	58 J	220 J	17,000	11,000 J	24,000	77,000	450,000 D
	3/00			<100,000	<100,000	<100,000	<100,000	<100,000	30,000 J	<100,000	62,000	270,000 D	1,300,000
	9/00			<50,000 J	<50,000 J	<50,000 J	<50,000 J	<50,000 J	14,000 J	9,200 J	42,000 J	59,000	540,000 BJ
	3/01			<50,000	<50,000	<50,000	<50,000	<50,000	53,000	11,000 J	90,000 D	120,000 D	990,000
	9/01			<400	<400	430	170 J	680	8,900 J	18,000 JD	21,000	29,000	440,000 BD
	4/02			2,100	50 J	410	100 J	400	<1,000	9,600 J	793,000 D	773,000 D	660,000 D
	10/02			120 J	23	310	73	267	<1,000	3,100	80,000	21,000 J	320,000
	5/03			<12	20 J	600 D	81	300	<1,000	6,700 D	79,000 D	29 J	910,000 D
	10/03			21	25	330 D	93	350	1,200 J	3,100 D	67,000 D	24,000 D	400,000 D
	6/04			<25	40	330 EJ	110	400	<1,000	5,900 D	56,000	51,000	1,200,000 D
MW-8SR	11/04	362.7	352.7	<1,200	<500	100 DJ	<500	164 DJ	<1,000	<500	35,000 D	5,300 D	10,000 D
	6/05			81 J	13	100	53	180	<1,000	<1.0	30,000	<200	<3.0
	11/05			15 J	13	130	66	260	<1,000	<1.0	32,000	<260 J	<3.0
	6/06			48	15	120	79	260	<1,000	<1.0	23,000	<200	<3.0
MW-9[D]	1/89	365.6	356	1,600	NA	64	130	270	<1,000	<10	660	1,200	1,500
(Replaced by MW-9S)	11/89			<1,000	48	25	60	60	<1,000	<10	670	150	<10
	11/91			<100	<10	9	19	30	<1,000	<1.0	95	18	<1
	8/95			<1,000	11 JD	26 JD	69 D	226 JD	<1,000	<50	50	28	110 D
	7/99			<10	4 J	2 J	9 J	18	<1,000	<10	<10	5.0 J	<10

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Monitoring Well	Sampling Date	Screen Elev. (ft. AMSL) Top	Bottom	Acetone	Benzene	Toluene	Ethyl-benzene	Xylene[A]	Methanol	Trichloro-ethene	Aniline	N,N-Dimethyl-aniline	Methylene Chloride
NYSDEC Groundwater Quality Standards (Part 700)				50	1	5	5	5	NA	5	5	1	5
MW-9[D]	3/00			<10	2 J	2 J	11	21	<1,000 J	<10	2.0 J	9.0 J	<10
(cont'd)	9/00			<10 J	11 J	2 J	6.0 J	18 J	<1,000	<10 J	1.0 J	6.0 J	<10 J
	3/01			<10	1 J	3 J	17	61	<1,000	<10	2.0 J	11	<10
	9/01			<10	10	3 J	7.0 J	35	<1,000 J	<10	<10	10	<10
	4/02			<23	10	2 J	6	17 J	370 J	<5	9	43	<5
	10/02			16 J	38	40	2 J	15 J	<1,000	<10	<5.0	2.0 J	<10
	5/03			<12	11	<5	7	18	<1,000	<5.0	0.9 J	3.0 J	<5
	10/03			<12	2 J	<5	5	19	<1,000	<5.0	1.0 J	<5.0	<5
	6/04			14 J	6 J	2.0 J	8 J	19 J	<1,000	<10	<5.0	<5.0	<10
	11/04			<25	4 J	2 J	9 J	30 J	<1,000	<10	<5.0	<5.0	<10
	6/05			44 J	1.9	3.2 J	24	64	<1,000	<1.0	2.6	1.9	<3.0
	11/05			<1.3 J	3.5	3.8	11	33	<1,000	<0.4	1.4	6.1 J	<0.5
	6/06			<5.0 J	1.1 J	2.3 J	25 J	60 J	<1,000 J	<1.0 J	<1.1 J	3.8 J	<3.0 J
MW-10[D]	1/89	355.5	345.9	<1,000,000	<10,000	<10,000	<10,000	<10,000	210,000	<10,000	720	9,400	520,000
(Replaced by MW-9D)	11/89			<100,000	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000	900	2,400	28,000
	11/91			<100	<1	3.0	2.0	<3.0	<1,000	<1	230	<10	41
	8/95			<1,000	<25 UD	<25 UD	<25 UD	<25 UD	<1,000	<25 UD	<5.0	<10	350 D
MW-11[D]	1/89	355.1	345.5	<100	<1	<1	<1	<1	8,400	<1	<12	<12	1
(Replaced MW-6D)	11/89			<100	<1	<1	<1	<1	<1,000	<1	230	<52	<1
	8/95			<1,000	<5	<5	<5	<5	<1,000	<5	<5	<10	<10
MW-11S	12/94	359.9	354.9	<380	<10	<10	<10	<10	880	<10	<5	<10	<10
	8/95			<1,000	<5	<5	<5	<5	<1,000	<5	<5	<10	<26
	10/95			NA	<5	<5	<5	<5	NA	<5	NA	NA	<5
MW-11D	12/94	349.8	344.8	<310	<5	<5	<5	<5	2,100	<5	<5	<10	<5
	8/95			<1,000	<5	<5	<5	<5	<1,000	<5	<5	<10	<10
	10/95			NA	<5	<5	<5	<5	NA	<5	NA	NA	<5
MW-12D[D]	1/89	354.8	345.2	<100,000	<1,000	<1,000	<1,000	<1,000	12,000	<1,000	67	410	120,000
(Replaced MW-8D)[E]	11/89			69,000	<1,000	<1,000	<1,000	<1,000	39,000	<1,000	<1,000	4,900	360,000
	11/91			<1,000,000	<10,000	<10,000	<10,000	<30,000	<10,000	<10,000	750	5,800	220,000
	8/95			<1,000	450 JD	430 JD	430 JD	1,250 JD	<1,000	<1,300 D	30 D	230 D	<13,000 D
	8/96			13	<10	<10	<10	<10	<1,000	2.0 J	<5	<10	40
MW-13S	11/89	368.7	359.1	<100	3	<1	<1	<1	<1,000	<1.0	<52	<52	<1.0
	11/90			<100	<1	<1	<1	<3	<1,000	<1.0	<10	<10	<1.0
	11/91			<100	<1	<1	<1	<3	<1,000	<1.0	<10	<10	<1.0
	11/92			<100	<1	<1	<1	<3	<1,000	<1.0	<10	<10	<1.0
MW-14D[C]	1/89	359	349.4	<100	<1	<1	<1	<1	<1,000	<1.0	<11	<11	<1.0
	11/89			<100	<1	<1	<1	<1	<1,000	<1.0	<10	<10	<1.0
MW-15S	1/89	370	360.25	<100	<1	<1	<1	<1	<1,000	<1.0	<11	<11	<1.0
	11/89			<100	<1	<1	<1	<1	<1,000	<1.0	<52	<52	<1.0
MW-16D[C]	1/89	350.8	341.2	<100	<1	<1	<1	<1	<1,000	<1.0	<11	<11	<1.0
	11/89			<100	<1	<1	<1	<1	<1,000	<1.0	<10	<10	<1.0

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Monitoring Well	Sampling Date	Screen Elev. (ft. AMSL) Top	Bottom	Acetone	Benzene	Toluene	Ethyl-benzene	Xylene[A]	Methanol	Trichloro-ethene	Aniline	N,N-Dimethyl-aniline	Methylene Chloride
NYSDEC Groundwater Quality Standards (Part 700)				50	1	5	5	5	NA	5	5	1	5
MW-17[C]	11/90	365.7	356.1	<100	<1	<1	<1	<3	<1,000	<1.0	<10	<10	<1.0
(Replaced by MW-17R)	11/91			<100	<1	<1	<1	<3	<1,000	<1.0	<10	<10	<1.0
	11/92			<100	<1	<1	<1	<3	<1,000	<1.0	<10	<10	<1.0
	8/95			<1,000	<5	<5	<5	<5	<1,000	<5	<5	<10	<11
	10/95			NA	<5	<5	<5	<5	NA	2 J	NA	NA	<5
	8/96			11	<10	<10	<10	<10	<1,000	<10	<5	<10	<10
	8/97			<10	<10	<10	<10	<10	<1,000	<10	<5	<10	<10
	2/99			<10	1 J	<10	<10	<10	<1,000	<10	<10	<10	<10 J
	3/00			<10	8 J	<10	<10	<10	<1,000 J	<10	<5.0	<10	<10
	9/00			<10 J	15 J	<10 J	<10 J	<10 J	<1,000 J	<10 J	24 J	4 J	1 J
	3/01			<10	8 J	<10	<10	<10	<1,000	<10	<10	<10	<10
	9/01			<10	5 J	<10	<10	<10	<1,000	<10	<10	<10	<10
	4/02			<10	6	<5	<5	<10	620 J	<5	150 (<5)[F]	110 (<5)[F]	<5
	10/02			<25 J	14	<10	<10	<20	<1,000	<10	<5[G]	<5[G]	<10
	5/03			<12	8	<5	<5	<5	<1,000	<5	<5	<5	<5
	11/03			<12	7	<5	<5	<10	<1,000	<5	<5	<5	<5
	6/04			<25	5 J	<10	<10	<20	<1,000	<10	<5	<5	<10
	11/04			--	--	--	--	--	200 J	--	<5	<5	--
	6/05			<5.0 J	<1.0	<5.0	<4.0	<5.0	<1,000	<1.0	<1.0	<1.0	<3.0
	11/05			<5.0 J	<1.0	<5.0	<4.0	<5.0	<1,000	<1.0	<1.0	<1.0 J	<3.0
	6/06			<5.0	0.8 J	<5.0	<4.0	<5.0	<1,000	<1.0	<1.1	<1.1	<3.0
MW-18	11/89	325.15	316.15	<100	<1	<1	<1	<1	<1,000	<1	<10	<10	<1
	11/90			<100	<1	<1	<1	<3	<1,000	<1	<10	<10	<1
	11/91			<100	<1	<1	<1	<3	<1,000	<1	<10	<10	<1
	11/92			<100	<1	<1	<1	<3	<1,000	<1	<10	<10	<1
	12/94			<10	<5	<5	<5	<5	<200	<5	<5	<10	<5
	8/95			<1,000	<5	<5	<5	<5	<1,000	<5	<5	<10	<10
	2/96			<1,000	<10	<10	<10	<10	<1,000	<10	<5	<10	<10
	8/96			<10	<10	<10	<10	<10	<1,000	<10	<5	<10	<10
	2/97			<10	<10	<10	<10	<10	<1,000	<10	<5	<10	<10
	8/97			<10	<10	<10	<10	<10	<1,000	<10	<5	<10	<10
	9/98			<10	<10	<10	<10	<10	<1,000	<10	<5[H]	<10	<10
	2/99			<10	<10	<10	<10	<10	<1,000	<10	<10	<10	<10
	7/99			<10 J	<10	<10	<10	<10	<1,000	<10	<10	<10	<10
	3/00			<10	<10	<10	<10	<10	<1,000 J	<10	<5	<10	<10
	9/00			<10 J	<10 J	<10 J	<10 J	<10 J	<1,000 J	<10 J	<10 J	<10	<10 J
	3/01			<10	<10	<10	<10	<10	<1,000	<10	<10	<10	<10

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Table 1. Summary of Historical Groundwater Monitoring Data, March 1988 through June 2006,
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Monitoring Well	Sampling Date	Screen Elev. (ft. AMSL) Top	Bottom	Acetone	Benzene	Toluene	Ethyl-benzene	Xylene[A]	Methanol	Trichloro-ethene	Aniline	N,N-Dimethyl-aniline	Methylene Chloride
NYSDEC Groundwater Quality Standards (Part 700)				50	1	5	5	5	NA	5	5	1	5
MW-18	9/01			<10	<10	<10	<10	<10	<1,000	<10	<10	<10	<10
(cont'd)	4/02			<10	<10	<10	<10	<20	720 J	<10	280 D (<5)[F]	200 D (<5)[F]	<10
	10/02			6 J	<10	<10	<10	<20	<1,000	<10	<5[G]	<5[G]	<10
	5/03			<12	<5	<5	<5	<5	280 J	<5	<5	<5	<5
	10/03			<12	<5	<5	<5	<10	<1,000	<5	0.7 J	<5	<5
	6/04			<25	<10	<10	<10	<20	<1,000	<10	R	R	<10
	11/04			--	--	--	--	--	<1,000	--	<5	<5	--
	6/05			<5.0 J	<1.0	<5.0	<4.0	<5.0	<1,000	<1.0	<1.0	<1.0	<3.0
	11/05			<5.0 J	<1.0	<5.0	<4.0	<5.0	<1,000	<1.0	<1.1	<1.1 J	<3.0
	6/06			<5.0	<1.0	<5.0	<4.0	<5.0	<1,000	<1.0	<1.0	<1.0	<3.0
MW-19	11/89	318.45	309.45	<100	<1	<1	<1	<1	<1,000	<1	<10	<10	<1
	12/94			<10	<5	<5	<5	<5	<200	<5	<5	<10	<5
	8/95			<1,000	<5	<5	<5	<5	<1,000	<5	<5	<10	<12
	10/95			NA	<5	<5	<5	<5	NA	<5	NA	NA	<5
	2/96			<1,000	<10	<10	<10	<10	<1,000	<10	<5	<10	<10
	8/96			<10	<10	<10	<10	<10	<1,000	<10	<5	<10	<10
	2/97			<10	<10	<10	<10	<10	<1,000	<10	<5	<10	<10
	8/97			<10	<10	<10	<10	<10	<1,000	<10	<5	<10	<10
	9/98			<10	<10	<10	<10	<10	<1,000	<10	<5[H]	5 J	<11
	2/99			<10	<10	<10	<10	<10	<1,000	<10	<10	<10	<10
	7/99			<10 J	<10 J	<10 J	<10 J	<10 J	<1,000	<10 J	<10	<10	<10 J
	3/00			<10	<10	<10	<10	<10	<1,000 J	<10	<5	<10	<10
	9/00			<10 J	<10 J	<10 J	<10 J	<10 J	<1,000 J	<10 J	<10 J	<10	<10 J
	3/01			<10	<10	<10	<10	<10	<1,000	<10	<10	<10	<10
	9/01			<10	<10	<10	<10	<10	<1,000	<10	<10	<10	<10
	4/02			<10	<5	<5	<5	<10	<1,000	<5	<5	<5	<5
	10/02			<25 J	<10	<10	<10	<20 J	<1,000	<10	<5[G]	<5[G]	<10
	5/03			<12	<5	<5	<5	<5	<1,000	<5	<5	<5	<5
	10/03			<11	<5	<5	<5	<10	<1,000	<5	51 J	16 J	<5
	6/04			<25	<10	<10	<10	<20	<1,000	<10	<5	<5	<10
	11/04			<25	<10	<10	<10	<20	<1,000	<10	<5	<5	<10
	6/05			<5.0 J	<1.0	<5.0	<4.0	<5.0	<1,000	<1.0	<1.1	<1.1	<3.0
	11/05			<5.0 J	<1.0	<5.0	<4.0	<5.0	<1,000	<1.0	<1.0	<1.0 J	<3.0
	6/06			<5.0	<1.0	<5.0	<4.0	<5.0	<1,000	<1.0	<1.0	<1.0	<3.0
MW-20[C]	11/89	329.85	320.85	<100	<1	<1	<1	<1	<1,000	<1	<10	<10	<1
	11/90			<100	<1	<1	<1	<3	<1,000	<1	<10	<10	<1
	11/91			<100	<1	<1	<1	<3	<1,000	<1	<10	<10	<1
	11/92			<100	<1	<1	<1	<3	<1,000	<1	<10	<10	<1
MW-21[C]	11/89	323.65	314.65	<100	<5	<1	<1	<1	<1,000	<1	<10	<10	<1
MW-22	11/89	368.55	359.55	<100	<1	<1	<1	<1	<1,000	<1	<10	<10	<1

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Table 1. Summary of Historical Groundwater Monitoring Data, March 1988 through June 2006,
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Monitoring Well	Sampling Date	Screen Elev. (ft. AMSL) Top	Bottom	Acetone	Benzene	Toluene	Ethyl-benzene	Xylene[A]	Methanol	Trichloro-ethene	Aniline	N,N-Dimethyl-aniline	Methylene Chloride
NYSDEC Groundwater Quality Standards (Part 700)				50	1	5	5	5	NA	5	5	1	5
MW-23S	12/94	364.1	354.1	<10	<5	<5	<5	<5	<200	<5	<5	<10	<5
	8/95			<1,000	<5	<5	<5	<5	<1,000	<5	<5	<10	<10
	2/96			<1,000	<10	<10	<10	<10	<1,000	<10	<5	<10	<10
	8/96			<10	<10	<10	<10	<10	<1,000	<10	7	<10	<10
	2/97			<10	<10	<10	<10	<10	<1,000	<10	11	<10	<10
	8/97			12	<10	<10	<10	<10	<1,000	<10	92	<10	<10
	9/98			<10	<10	<10	<10	<10	<1,000	<10	56[H]	7 J	<10
	2/99			<10	<10	<10	<10	<10	<1,000	<10	<10	10	<10 J
	6/99			<10 J	<10	<10	<10	<10	<1,000 J	<10	<10 J	2 J	<10 J
	7/99			<10 J	<10	<10	<10	<10	<1,000	<10	<10	<10	<10
	3/00			<10	<10	<10	<10	<10	<1,000 J	<10	<5	2 J	<10
	9/00			<10 J	<10 J	<10 J	<10 J	<10 J	<1,000 J	<10 J	<10 J	2 J	<10 J
	3/01			<10	<10	<10	<10	<10	<1,000	<10	<10	<10	<10
	9/01			<10	<10	<10	<10	<10	<1,000	<10	<10	<10	<10
	4/02			<10	<5	<5	<5	<10	<1,000	<5	<5	<5	<5
	10/02			<25 J	<10	<10	<10	<20 J	<1,000	<10	<5[G]	<5[G]	<10
	5/03			<62	<25	<25	<25	<50	380 J	<25	<5	<5	<25
	10/03			<12	<5	<5	<5	<10	<1,000	<5	60	<5	<5
	6/04			<25	<10	<10	<10	<20	<1,000	<10	<5	<5	<10
	11/04			--	--	--	--	--	<1,000	--	<5	<5	--
	6/05			<5.0 J	<1.0	<5.0	<4.0	<5.0	<1,000	<1.0	<1.0	<1.0	<3.0
	11/05			<5.0 J	<1.0	<5.0	<4.0	<5.0	<1,000	<1.0	<1.0	<1.0 J	<3.0
	6/06			<5.0 J	<1.0	<5.0	<4.0	<5.0	<1,000	<1.0	<1.2	<1.2	<3.0
MW-23I	12/94	341.2	336.2	<10	<5.0	<5	<5.0	<5.0	<200	<5.0	<5.0	<10	<5
	8/95			<1,000	<5	<5	<5	<5	<1,000	<5	<5	<10	<10
	2/96			<1,000	<10	<10	<10	<10	<1,000	<10	<5	<10	<10
	8/96			<10	<10	<10	<10	<10	<1,000	<10	<5	<10	<10
	2/97			<10	<10	<10	<10	<10	<1,000	<10	<5	<10	<10
	8/97			<10	<10	<10	<10	<10	<1,000	<10	<5	<11	<10
	9/98			<10	<10	<10	<10	<10	<1,000	<10	<5[H]	<10	<10
	2/99			<10	<10	<10	<10	<10	<1,000	<10	<10	<10	<10 J
	7/99			<10 J	<10	<10	<10	<10	<1,000	<10	<10	<10	<10
	3/00			<10	<10	<10	<10	<10	<1,000 J	<10	<5	<10	<10
	9/00			<10 J	<10 J	<10 J	<10 J	<10 J	<1,000 J	<10 J	<10 J	<10	<10 J
	3/01			<10	<10	<10	<10	<10	<1,000	<10	<10	<10	<10
	9/01			4 J	<10	<10	<10	2 J	<1,000	<10	<10	<10	<10
	4/02			<10	<5	<5	<5	<10	<1,000	<5	<5	<5	2 J
	10/02			<25 J	<10	<10	<10	<20 J	<1,000	<10	<5[G]	<5[G]	<10
	5/03			<12	<5	<5	<5	<5	<1,000	<5	<5	<5	<5
	10/03			<12	<5	<5	<5	<10	<1,000	<5	<5	<5	<5
	6/04			<25	<10	<10	<10	<20	<1,000	<10	1 J	<5	<10
	11/04			--	--	--	--	--	<1,000	--	<5	<5	--

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Monitoring Well	Sampling Date	Screen Elev. (ft. AMSL) Top	Bottom	Acetone	Benzene	Toluene	Ethyl-benzene	Xylene[A]	Methanol	Trichloro-ethene	Aniline	N,N-Dimethyl-aniline	Methylene Chloride
NYSDEC Groundwater Quality Standards (Part 700)				50	1	5	5	5	NA	5	5	1	5
MW-23I	6/05			<5.0 J	<1.0	<5.0	<4.0	<5.0	<1,000	<1.0	<1.0	<1.0	<3.0
(cont'd)	11/05			<5.0 J	<1.0	<5.0	<4.0	<5.0	<1,000	<1.0	<1.0	<1.0 J	<3.0
	6/06			<5.0 J	<1.0	0.6 J	<4.0	<5.0	<1,000	<1.0	<1.0	<1.0	<3.0
MW-24S[C]	12/94	358.4	352.4	<10	<5	<5	<5	<5	<1,000	<5	<5	<10	<5
(Replaced by MW-24SR)	8/95			<1,000	<5	<5	<5	<5	<1,000	<5	<5	<10	<10
	2/96			<1,000	<10	<10	<10	<10	<1,000	<10	<5	<10	<10
	2/97			<1,000	<10	<10	<10	<10	<1,000	<10	<5	<10	<10
	9/98			<10	<10	<10	<10	<10	<1,000	<10	<5[H]	<10	<10
	6/99			<10 J	<10	<10	<10	<10	<1,000 J	<10	<10 J	<10 J	<10 J
	7/99			<10 J	<10	<10	<10	<10	<1,000	<10	<10	<10	<10
	3/00			<10 J	<10 J	<10 J	<10 J	<10 J	<1,000 J	<10 J	<10 J	<10	<10 J
	9/01			<10	<10	<10	<10	<10	<1,000	<10	<10	<10	<10
	6/02[F]			NS	NS	NS	NS	NS	NS	NS	ND	ND	NS
	10/02			<25 J	<10	<10	<10	<20 J	<1,000	<10	<5[G]	<5[G]	<10
	10/03			<12	<5	<5	<5	<10	<1,000	<5	16	<6	<5
	6/04[J]			<25	<10	<10	<10	<20	<1,000	<10	<5	<5	<10
	11/04			--	--	--	--	--	<1,000	--	<5	<5	--
	6/05			<5.0 J	<1.0	<5.0	<4.0	<5.0	<1,000	<1.0	<1.0	<1.0	<3.0
	11/05			<5.0 J	<1.0	<5.0	<4.0	<5.0	<1,000	<1.0	<1.0	<1.0 J	<3.0
MW-24D[C]	12/94	334.4	341.2	<10	<5	<5	<5	<5	<1,000	<5	<5	<10	<5
(Replaced by MW-24DR)	8/95			<1,000	<5	<5	<5	<5	<1,000	<5	<5	<10	<10
	2/96			<1,000	<10	<10	<10	<10	<1,000	<10	<5	<10	<10
	2/97			<1,000	<10	<10	<10	<10	<1,000	<10	<5	<10	<10
	9/98			<10	<10	<10	<10	<10	<1,000	<10	<5[H]	<10	<10
	7/99			<10 J	<10 J	<10 J	<10 J	<10 J	<1,000	<10 J	<10	<10	<10 J
	9/00			<10 J	<10 J	<10 J	<10 J	<10 J	<1,000 J	<10 J	<10 J	<10	<10 J
	9/01			<10	<10	<10	<10	<10	<1,000	<10	<10	<10	<10
	6/02[F]			NS	NS	NS	NS	NS	NS	NS	ND	ND	NS
	10/02			<25 J	<10	<10	<10	<20 J	<1,000	<10	<5[G]	<5[G]	<10
	10/03			<12	<5	<5	<5	<10	<1,000	<5	0.5 J	<5	<5
	11/04			--	--	--	--	--	<1,000	--	<5	<5	--
	6/05			<5 J	<1	<5	<4	<5	<1,000	<1	<1	<1	<3
	11/05			<5.0 J	<1.0	<5.0	<4.0	<5.0	<1,000	<1.0	<1.1	<1.1 J	<3.0
MW-25S	8/95	361.2	356.2	<1,000	<5	<5	<5	<5	<1,000	<5	<5	0.7 J	<10
	10/95			NA	<5	<5	<5	<5	NA	<5	<5	<10	<5
	8/96			<10	<10	<10	<10	<10	<1,000	<10	<5	<10	<10
	8/97			<10	<10	<10	<10	<10	<1,000	<10	<5	<10	<10
	2/99			<10	<10	<10	<10	<10	<1,000	<10	130	<10	<10 J
	6/99			<10 J	<10	<10	<10	<10	<1,000 J	<10	110 J	21 a	<10 J
	7/99			<10 J	<10	<10	<10	<10	<1,000	<10	5 J	<10	<10
	3/00			<10	<10	<10	<10	<10	<1,000 J	<10	<5	<10	<10

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Monitoring Well	Sampling Date	Screen Elev. (ft. AMSL) Top	Bottom	Acetone	Benzene	Toluene	Ethyl-benzene	Xylene[A]	Methanol	Trichloro-ethene	Aniline	N,N-Dimethyl-aniline	Methylene Chloride
NYSDEC Groundwater Quality Standards (Part 700)				50	1	5	5	5	NA	5	5	1	5
MW-25S	9/00			<10 J	<10 J	<10 J	<10 J	<10 J	<1,000 J	<10 J	<10 J	<10	<10 J
(cont'd.)	3/01			<10	<10	<10	<10	<10	<1,000	<10	<10	<10	<10
	9/01			<10	<10	<10	<10	<10	<1,000	<10	<10	<10	<10
	4/02			<10	<5	<5	<5	<10	<1,000	<5	<5	<5	<5
	10/02			<25	<10	<10	<10	<20	<1,000	<10	<5[D]	<5[D]	<10
	5/03			<12	<5	<5	<5	<5	<1,000	<5	<5	<5	<5
	11/03			<12	<5	<5	<5	<10	<1,000	<5	<5	<5	<5
	6/04			<25	<10	<10	<10	<20	<1,000	<10	<5	<5	<10
	11/04			--	--	--	--	--	<1,000	--	<5	<5	--
	6/05			<5.0 J	<1.0	<5.0	<4.0	<5.0	<1,000	<1.0	<1.1	<1.1	<3.0
	11/05			<5.0 J	<1.0	<5.0	<4.0	<5.0	<1,000	<1.0	<1.0	<1.0 J	<3.0
	6/06			<5.0 J	<1.0	<5.0	<4.0	<5.0	<1,000	<1.0	<1.0	<1.0	<3.0
MW-25D	8/95	349.55	344.55	<1,000	<5	<5	<5	<5	<1,000	<5	<5	1 J	<5
	10/95			NA	<5	<5	<5	<5	NA	3 J	<5	<10	<5
	8/96			15	<10	<10	<10	<10	<1,000	<10	<5	<10	<10
	8/97			<10	<10	<10	<10	<10	<1,000	<10	<5	<11	<10
	2/99			<10	<10	<10	<10	<10	<1,000	<10	<10	<10	<10 J
	3/00			<10	<10	<10	<10	<10	<1,000 J	<10	<5	<10	<10
	3/01			<10	<10	<10	<10	<10	<1,000	<10	5 J	<10	<10
	4/02			<10	<5	<5	<5	<10	<1,000	<5	<5	<5	<5
	5/03			<12	<5	<5	<5	<5	<1,000	<5	<5	<5	<5
	6/04			<25	<10	<10	<10	<20	<1,000	<10	<5	<5	<10
	6/05			<5.0 J	<1.0	<5.0	<4.0	<5.0	<1,000	<1.0	<1.0	<1.0	<3.0
	6/06			<5.0 J	<1.0	0.7 J	<4.0	<5.0	<1,000	<1.0	<1.0	<1.0	<3.0
MW-26	12/96	365	355.3	<10	<10	<10	<10	<10	<1,000	<10	<5	<10	<10
MW-27	9/98	362.5	354.5	23	3 J	4 J	<10	3 J	<1,000	<10	340 DJ	<10	<10
	7/99			<10 J	4 J	2 J	3 J	8 J	<1,000	<10	740 D	<10	<10
	3/00			<10	8 J	<10	8 J	2 J	<1,000 J	<10	110 D	1 J	<10
	9/00			<10 J	4 J	<10 J	3 J	1 J	<1,000 J	<10 J	16 J	2 J	1 J
	3/01			<10	5 J	<10	5 J	2 J	<1,000	<10	260 D	2 J	<10
	9/01			<10	5 J	<10	2 J	<10	<1,000 J	<10	26	<10	<10
	4/02			<18	7	11	12	26	<1,000	<5	176,000 DJ	19 J	<5
	10/02			9 J	3 J	<10	<10	<20	<1,000	4 J	2,700 D	100 J	60 JN
	5/03			<12	8	11	23	51	<1,000	<5	15,000 DJ	11	43
	10/03			170	5	<5	<5	3 J	<1,000	<5	3,700 D	<5	240 D
	6/04			23 J	5 J	4 J	2 J	6 J	<1,000	<10	3,700 D	20 J	<10
	11/04			<120 (28)	<50 (4 J)	<50 (2 J)	<50 (<10)	<100 (<20)	<1,000	<50 (<10)	1,100 DJ	<5	310 (490 D)
	6/05			31 J	6.1	15	5.8	15	<1,000	<1.0	5,200	<23	<3.0
	11/05			35 J (37 J)	11 (12)	77 (78)	26 (26)	86 (88)	<1,000 (<1,000)	<1.0 (<1.0)	37,000 (38,000)	<270 J (<260 J)	<3.0 (<3.0)
	6/06			5.3 J (5.8 J)	9.5 J (8.9 J)	50 J (48 J)	25 J (25 J)	66 J (63 J)	<1,000 J (<1,000 J)	<1.0 J (<1.0 J)	14,000 J (12,000 J)	<100 J (<100 J)	<3.0 J (<3.0 J)

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Monitoring Well	Sampling Date	Screen Elev. (ft. AMSL) Top	Bottom	Acetone	Benzene	Toluene	Ethyl-benzene	Xylene[A]	Methanol	Trichloro-ethene	Aniline	N,N-Dimethyl-aniline	Methylene Chloride
NYSDEC Groundwater Quality Standards (Part 700)				50	1	5	5	5	NA	5	5	1	5
MW-28	9/98	363.6	355.6	<5,000 J	<5,000	<5,000	<5,000	<5,000	2,200	<5,000	546 D[H]	54	64,000 J
	7/99			<500 J	<500	<500	<500	<500	<1,000	<500	1,100 D	40	39,000 D
	3/00			<10,000	<10,000	<10,000	<10,000	<10,000	<1,000 J	<10,000	1,300 D	30	130,000 J
	9/00			<1,000 J	<1,000 J	<1,000 J	<1,000 J	<1,000 J	<1,000 J	<1,000 J	540 DJ	<10	8,100 BJ
	3/01			<400	<400	<400	<400	<400	<1,000	<400	3,200 D	7 J	5,900 B
	9/01			<400	<400	<400	<400	<400	<1,000 J	<400	1,000 D	<10	4,700 B
	4/02			<49	8	6	9	10 J	<1,000	<5	33,400 D	57	4,600 D
	10/02			14 J	8 J	6 J	11	12 J	<1,000	<10	2,700 D	R	<10
	5/03			13	4 J	2 J	2 J	8 J	<1,000	<5	1,000 DJ	3 J	52
	10/03			24	11	6	12	13 J	<1,000	<5	1,900 D	<5	<5
	6/04			20 J	4 J	2 J	5 J	4 J	<1,000	<10	910 D	<5	<10
	11/04			<120 (<25)	<50 (4 J)	<50 (<10)	<50 (5 J)	<100 (3 J)	190 J	<50 (<10)	640 DJ	<5	<50 (<10)
	6/05			5.2 J	4.5	1.2 J	4.6	3.9 J	<1,000	<1.0	630	<5.0	<3.0
	11/05			6.8 J (7.8 J)	5.1 (5.8)	<5.0 (<5.0)	4.7 (4.7)	<5.0 (<5.0)	<1,000 (<1,000)	<1.0 (<1.0)	360 J (350 J)	<2.2 (<2.1)	<3.0 (<3.0)
	6/06			<5.0 J (<5.0 J)	6.6 J (6.3 J)	1.2 J (1.3 J)	5.3 J (5.4 J)	4.2 J (4.3 J)	<500 J (<1,000 J)	<1.0 J (<1.0 J)	430 J (530 J)	<2.1 J (<5.0 J)	<3.0 J (<3.0 J)
MW-29	9/98	362.9	345.9	<10	<10	<10	<10	2 J	<1,000	<10	<10	13	<10
	2/99			7 J	<10	<10	<10	1 J	<1,000	<10	5 J	4 J	<10
	7/99			<10	<10	<10	<10	<10	<1,000	<10	2 J	4 J	<10
	3/00			<10	<10	<10	<10	<10	<1,000 J	<10	450 D	6 J	<10
	9/00			<10 J	<10 J	<10 J	<10 J	<10 J	<1,000 J	<10 J	24 J	4 J	<10 J
	3/01			<10	<10	<10	<10	<10	<1,000	<10	30	4 J	<10
	9/01			<10	<10	<10	<10	<10	<1,000	<10	7 J	2 J	<10
	4/02			<10	<5	<5	<5	<10	<1,000	<5	3 J	9	<6
	10/02			<25 J	<10	<10	<10	<20	<1,000	<10	8	R	4 JN
	5/03			<12	<5	<5	<5	<10	<1,000	<5	19	1 J	<3
	10/03			<12	<5	<5	<5	<10	<1,000	<5	2 J	<5	<5
	6/04			<25	<10	<10	<10	<20	<1,000	<10	3 J	<5	<10
	11/04			<120	<50	<50	<50	<100	420 J	<50	<5	<5	<50
	6/05			<5.0 J	<1.0	<5.0	<4.0	<5.0	<1,000	<1.0	<1.0	<1.0	<3.0
	11/05			<5.0 J	<1.0	<5.0	<4.0	<5.0	<1,000	<1.0	<1.0	<1.0 J	<3.0
	6/06			<5.0	<1.0	<5.0	<4.0	<5.0	<1,000	<1.0	<1.0	<1.0	<3.0
MW-30	9/98	363.5	355.5	<10	<10	<10	<10	<10	<1,000	<10	<10	<10	<10
	2/99			7 J	<10	<10	<10	<10	<1,000	<10	<10	2 J	<10
	7/99			<10	0.7 J	<10	<10	<10	<1,000	0.5 J	<10	1 J	<10
	3/00			<10	<10	<10	<10	<10	<1,000 J	<10	18	2 J	4 J
	9/00			<10 J	<10 J	<10 J	<10 J	<10 J	<1,000 J	<10 J	9 J	2 J	2 J
	3/01			<10	<10	<10	<10	<10	<1,000	<10	8 J	2 J	<10
	9/01			4 J	2 J	<10	<10	<10	<1,000 J	<10	3 J	1 J	<10
	4/02			<10	<5	<5	<5	<10	<1,000	<5	250	210	<5
	10/02			<25 J	<10	<10	<10	<20 J	<1,000	<10	R	R	<10
	5/03			<62	<25	<25	<25	<50	<1,000	<25	18	0.6 J	8 J

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Monitoring Well	Sampling Date	Screen Elev. (ft. AMSL) Top	Bottom	Acetone	Benzene	Toluene	Ethyl-benzene	Xylene[A]	Methanol	Trichloro-ethene	Aniline	N,N-Dimethyl-aniline	Methylene Chloride
NYSDEC Groundwater Quality Standards (Part 700)				50	1	5	5	5	NA	5	5	1	5
MW-30	10/03			<12	<5	<5	<5	<10	<1,000	<5	4 J	<5	<5
(cont'd.)	6/04			<25	<10	<10	<10	<20	<1,000	<10	<5	<5	<10
	11/04			<120	<50	<50	<50	<100	<1,000	<50	<5	<5	<50
	6/05			<5.0 J	0.3 J	<5.0	<4.0	<5.0	<1,000	<1.0	<1.0	<1.0	<3.0
	11/05			<5.0 J	0.7 J	0.6 J	<4.0	0.5 J	<1,000	<1.0	240	<1.0 J	<3.0
	6/06			<5.0	0.6 J	0.4 J	<4.0	<5.0	<1,000	<1.0	29	<1.0	<3.0
MW-31	9/98	363.7	355.4	<10	12	<10	<10	<10	<1,000	<10	34	4 J	<10
	7/99			<10	16	<10	<10	<10	<1,000	<10	230 D	3 J	<10
	3/00			<10	16	<10	<10	<10	<1,000 J	<10	3 J	4 J	<10
	9/00			<10 J	12 J	<10 J	<10 J	<10 J	<1,000	<10 J	10	6 J	<10 J
	3/01			21	11	<10	<10	<10	<1,000	<10	<10	5 J	<10
	9/01			<10	14	<10	<10	<10	<1,000 J	<10	91 D	3 J	<10
	4/02			<14	9	<5	<5	<10	<1,000	<5	804 D	21	<5
	10/02			<25	11	<10	<10	<20	<1,000	<10	560 D	1 J	<10
	5/03			<12	9	<5	<5	<10	<1,000	<5	0.9 J	3 J	<5
	10/03			1,200 D	13	<5	<5	<5	<1,000	<5	88	<5	<5
	6/04			15 J	12	<10	<10	<20	<1,000	<10	3 J	<5	<10
	11/04			<25	9 J	<10	<10	<20	<1,000	<10	<5	<5	<10
	6/05			<5.0 J	11	<5.0	<4.0	1.3 J	<1,000	<1.0	3.2	2.7	<3.0
	11/05			<1.3 J	6.7	<0.4	<0.5	0.6	<1,000	<0.4	16	<1.0 J	<0.5
	6/06			<5.0 J	11 J	0.6 J	<4.0 J	1.7 J	<1,000 J	<1.0 J	<1.0 J	2.4 J	<3.0 J
MW-32	9/98	364	356	<10	16	2 J	5 J	3 J	<1,000	<10	6,300 D	4 J	<10
	7/99			3 J	14	2 J	4 J	<10	<1,000	56	<10	3 J	<10
	3/00			<10	5 J	<10	<10	<10	<1,000 J	<10	800 D	<10	<10
	9/00			<10 J	12 J	<10 J	<10 J	<10 J	<1,000	<10 J	4,500 D	<10	<10 J
	3/01			<10	5 J	<10	<10	<10	<1,000	<10	1,900 D	2 J	<10
	9/01			<10	10	<10	<10	<10	<1,000 J	<10	1,100 D	2 J	<10
	4/02			<15	4 J	<5	<5	<10	<1,000	<5	4,620 D	11	<5
	10/02			<25	4 J	<10	<10	<20	<1,000	<10	50	R	<10
	5/03			<12	<5	<5	<5	<10	<1,000	<5	0.6 J	0.7 J	<5
	10/03			20	2 J	<5	<5	<10	<1,000	<5	<5	<5	<5
	6/04			6 J	1 J	<10	<10	<20	<1,000	<10	1 J	<5	<10
	11/04			<25	<10	<10	<10	<20	<1,000	<10	<5	<5	<10
	6/05			<5.0 J	1.0	<5.0	<4.0	<5.0	<1,000	<1.0	0.4 J	<1.0	<3.0
	11/05			<5.0 J	<1.0	<5.0	<4.0	<5.0	<1,000	<1.0	<1.0	<1.0 J	<3.0
	6/06			<5.0 J	<1.0 J	<5.0 J	<4.0 J	<5.0 J	<1,000 J	<1.0 J	<1.0 J	<1.0 J	<3.0 J
MW-33	9/98	344.1	356.1	<10	<10	<10	<10	<10	<1,000	<10	9 J	6 J	<10
	2/99			<10	<10	<10	<10	<10	<1,000	<10	120	6 J	<10
	7/99			5 J	2 J	0.7 J	<10	<10	<1,000	<10	150	8 J	<23
	3/00			<10 J	<10	<10	<10	<10	<1,000 J	<10	51	7 J	11
	9/00			45 J	4 J	1 J	<10 J	<10 J	<1,000	<10 J	540 D	23	330 DJ

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Monitoring Well	Sampling Date	Screen Elev. (ft. AMSL) Top	Bottom	Acetone	Benzene	Toluene	Ethyl-benzene	Xylene[A]	Methanol	Trichloro-ethene	Aniline	N,N-Dimethyl-aniline	Methylene Chloride
NYSDEC Groundwater Quality Standards (Part 700)				50	1	5	5	5	NA	5	5	1	5
MW-33	3/01			17 J	<20	<20	<20	<20	<1,000	<20	1,300 D	16	370 B
(cont'd)	9/01			21	5 J	<10	<10	<10	<1,000 J	<10	1,900 D	12	<18
	4/02			<18	3 J	<5	<5	<10	<1,000	<5	2,780 D	21	19
	10/02			11 J	4 J	<10	<10	<20	<1,000	<10	290 D	3 J	4 J
	5/03			88	13	<5	<5	<10	<1,000	<5	2,000	35 J	2,800 D
	10/03			22	2 J	<5	<5	<10	<1,000	<5	1,900 D	<6	<5
	6/04			9 J	12 J	<10 J	<10 J	<20 J	<1,000	<10 J	2,700 D	5 J	<10 J
	11/04			--	--	--	--	--	<1,000	--	2,700 D	5 J	--
	6/05			<5.0 J	11	1.0 J	<4.0	<5.0	<1,000	<1.0	1,800	<10	<3.0
	11/05			<5.0 J	16	1.8 J	<4.0	<5.0	<1,000	<1.0	3,500	<25 J	<3.0
	6/06			<5.0 J	6.7 J	0.7 J	<4.0 J	<5.0 J	<1,000 J	<1.0 J	370 J	3.5 J	<3.0 J
MW-34	9/98	362.7	354.7	<10	<10	<10	<10	<10	<1,000	<10	83	<10	<10
	7/99			2 J	0.9 J	1 J	<10	<10	<1,000	<10	380 D	2 J	<10
	3/00			<10 J	1 J	2 J	<10	<10	<1,000 J	<10	200 D	3 J	<10
	9/00			<10 J	<10 J	<10 J	<10 J	<10 J	<1,000	<10 J	320 D	4 J	<10 J
	3/01			<10	<10	2 J	<10	2 J	<1,000	<10	700 D	5 J	<10
	9/01			7 J	2 J	2 J	<10	2 J	<1,000 J	<10	76	3 J	<10
	4/02			<32	<5	<5	<5	<10	<1,000	<5	640 D	15	<5
	10/02			37 J	<10	<10	<10	<20	<1,000	<10	380 DJ	2 J	<10
	5/03			16	<5	<5	<5	<10	<1,000	<5	140	4 J	<5
	10/03			9 J	<5	<5	<5	<10	<1,000	<5	18	<6	<5
	6/04			24 J	<10	<10	<10	<20	<1,000	<10	30	<5	<10
	11/04			<25	<10	<10	<10	<20	180 J	<10	14	<5	<10
	6/05			5.6 J	0.7 J	0.9 J	<4.0	1.2 J	<1,000	0.4 J	16	2.5	<3.0
	11/05			20 J	<0.3	0.9	<0.5	1.1	<1,000	<0.4	12	2 J	<0.5
	6/06			6.4	0.6 J	0.5 J	<4.0	<5.0	<1,000	<1.0	16	2.3	<3.0
MW-35	9/98	363	355	<10	<10	<10	<10	<10	<1,000	<10	6 J	6 J	<10
	7/99			<10	0.7 J	<10	<10	<10	<1,000	<10	3 J	4 J	<10
	3/00			<10 J	<10	<10	<10	<10	<1,000 J	<10	<10	2 J	<10
	9/00			<10 J	<10 J	<10 J	<10 J	<10 J	<1,000	<10 J	<10	3 J	<10 J
	3/01			<10	<10	<10	<10	<10	<1,000	<10	<10	<10	<10
	9/01			<10	<10	<10	<10	<10	<1,000 J	<10	<10	2 J	<10
	4/02			<13	<5	<5	<5	<10	<1,000	<5	3 J	4 J	<5
	10/02			<25	<10	<10	<10	<20	<1,000	<10	2 J	R	<10
	5/03			<12	<5	<5	<5	<10	<1,000	<5	1,000	<100	<5
	10/03			5 J	<5	<5	<5	<10	<1,000	<5	4 J	<5	<5
	6/04			<25	<10	<10	<10	<20	<1,000	<10	30	4 J	<10
	11/04			<25	<10	<10	<10	<20	240 J	<10	82	<5	<10
	6/05			<5.0 J	<1.0	<5.0	<4.0	<5.0	<1,000	<1.0	<1.0	<1.0	<3.0
	11/05			<5.0 J	<1.0	<5.0	<4.0	<5.0	<1,000	<1.0	<1.0	<1.0 J	<3.0
	6/06			<5.0	<1.0	<5.0	<4.0	<5.0	<1,000	<1.0	0.4 J	<1.0	<3.0

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Monitoring Well	Sampling Date	Screen Elev. (ft. AMSL) Top	Bottom	Acetone	Benzene	Toluene	Ethyl-benzene	Xylene[A]	Methanol	Trichloro-ethene	Aniline	N,N-Dimethyl-aniline	Methylene Chloride
NYSDEC Groundwater Quality Standards (Part 700)				50	1	5	5	5	NA	5	5	1	5
MW-36	9/98	363.6	355.6	<10	<10	<10	<10	<10	<1,000	<10	290 D	6 J	<10
	2/99			<10	<10	<10	<10	<10	<1,000	<10	860 D	4 J	<10
	7/99			8 J	0.8 J	<10	<10	<10	<1,000	<10	250	<10	<10
	3/00			<10 J	<10	<10	<10	<10	<1,000 J	<10	60	7 J	<10
	9/00			5 J	<10 J	<10 J	<10 J	<10 J	<1,000 J	<10 J	8 J	6 J	<5
	3/01			<10	<10	<10	<10	<10	<1,000	<10	<10	<10	<10
	9/01			54	<10	<10	<10	<10	<1,000 J	<10	350 D	5 J	<10
	4/02			<20	<5	<5	<5	<10	<1,000	<5	9	41	<5
	10/02			12 J	<10	<10	<10	<20	<1,000	<10	2 J	2 J	<10
	5/03			9 J	<5	<5	<5	<10	<1,000	<5	67	4 J	<5
	10/03			580 D	<5	<5	<5	<10	<1,000	<5	100	<5	<5
	6/04			22 J	<10 J	<10 J	<10 J	<20 J	<1,000	<10 J	33	7	<10 J
	11/04			13 J	<10	<10	<10	<20	<1,000	<10	22	<5	<10
	6/05			24 J	2.1	<5.0	<4.0	1.0 J	<1,000	<1.0	1,200	<5.4	<3.0
	11/05			77 J	3.6	2.0 J	0.6 J	2.8 J	<1,000	<1.0	1,600	<10 J	<3.0
	6/06			25	1.6	0.7 J	<4.0	1.2 J	<1,000	<1.0	76	1.9	<3.0
TW-01	12/96	365.1	355.4	<10	82	4 J	6 J	4 J	<1,000	<10	2,090 D	13	4 J
	9/98			<10	15	<10	4 J	<10	<1,000	<10	4,400 DEJ	4 J	<10
	2/99			<10	24	2 J	2 J	2 J	<1,000	<10	9,000 D	5 J	<10
	7/99			<10	16	1 J	3 J	<10	<1,000	<10	4,400 D	4 J	<10
	3/00			<10	16	<10	<10	<10	<1,000 J	<10	280 D	4 J	<10
	9/00			<10 J	11 J	<10 J	<10 J	<10 J	<1,000	<10 J	15	2 J	<10 J
	3/01			<10	5 J	<10	<10	<10	<1,000	<10	<10	3 J	<10
	9/01			<10	10	<10	<10	<10	<1,000 J	<10	<10	2 J	<10
	4/02			<14	3 J	<5	<5	<10	<1,000	<5	8	13	<5
	10/02			<25	7 J	<10	<10	<20	<1,000	<10	<5	R	<10
	5/03			<12	7	<5	<5	<10	<1,000	<5	<5	1 J	<5
	10/03			<12	6	<5	<5	<10	<1,000	<5	0.6 J	<5	<5
	6/04			6 J	3 J	<10	<10	<20	<1,000	<10	<5	<5	<10
	11/04			<25	2 J	<10	<10	<20	<1,000	<10	<5	<5	<10
	6/05			<5.0 J	1.8	<5.0	<4.0	<5.0	<1,000	<1.0	<1.0	<1.0	<3.0
	11/05			<1.3 J	1.9	<0.4	<0.5	<0.4	<1,000	<0.4	<1.0	<1.0 J	<0.5
	6/06			<5.0 J	1 J	<5.0 J	<4.0 J	<5.0 J	<1,000 J	<1.0 J	<1.0 J	0.8 J	<3.0 J
TW-02[C]	12/96	363.3	353.3	53	10	77	16	65	<1,000	585 D	15,900 JD	3,920 D	42,449 D
(Replaced by TW-02R)[E]	9/98			<500 J	<500 J	<500 J	<500 J	53,000	5,000	300 J	38,000 D	61,000 D	86,000 D
	2/99			<1,000	<1,000	190 J	<1,000	150 J	14,000JN	<1,000	83,000 D	7,900	14,000 B
	7/99			630	37	240 J	31	150	<1,000	55	100,000 D	3,500 J	9,700 D
	3/00			<1,000 J	<1,000	160 J	<1,000	240 J	<1,000 J	<1,000	64,000 D	3,900	13,000
	9/00			190 J	28 J	95 J	35 J	160 J	<1,000	6 J	79,000	<10,000	390 J
	3/01			81	19	68	28	130	<1,000	<10	67,000 D	650 J	400 D
	9/01			57	25	70	31	140	<1,000 J	<20	63,000 D	32	48 B

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Monitoring Well	Sampling Date	Screen Elev. (ft. AMSL) Top	Bottom	Acetone	Benzene	Toluene	Ethyl-benzene	Xylene[A]	Methanol	Trichloro-ethene	Aniline	N,N-Dimethyl-aniline	Methylene Chloride
NYSDEC Groundwater Quality Standards (Part 700)				50	1	5	5	5	NA	5	5	1	5
TW-02	4/02			240	19	65	23	96	<1,000	<5	1,090,000 D	<5,300	14
(cont'd.)	10/02			110 J	15	19	23	65	<1,000	<10	80,000 D	10 J	<10
	5/03			240	30	130	49	226	<1,000	<5	160,000 D	230	97
	10/03			68	28	75 J	<5	<10	<1,000	2 J	92,000 D	<260	91
	6/04			140 J	19 J	39 J	31 J	111 J	<1,000	<10 J	82,000	<5,200	4 J
TW-02RR	11/04	363.3	353.3	18 J	4 J	8 J	4 J	16 J	<1,000	<10	7,100 D	<5	<10
	6/05			7.2 J	3.6	2.1 J	3.6 J	9.6	<1,000	0.3 J	8,400	<50	<3.0
	11/05			26 J	6	4.1	3.6	11	<1,000	<0.4	14,000	<110 J	<0.5
	6/06			16	4.4	1.3 J	2.7 J	6.7	<1,000	<1.0	10,000	<100	<3.0
PZ-4D	11/89	350.8	345.9	<100	<1	<1	<1	<1	<1,000	<1	<10	<10	<1
	11/90			<100	<1	<1	<1	<3	<1,000	<1	<10	<10	<1
	11/91			<100	<1	<1	<1	<3	<1,000	<1	<10	<10	<1
	11/92			<100	<1	<1	<1	<3	<1,000	<1	<10	<10	<1
	8/95			<1,000	<5	<5	<5	<5	<1,000	<5	<5	0.8 J	<5
	10/95			NA	<5	<5	<5	<5	NA	<5	<5	<10	<5
	8/96			<10	<10	<10	<10	<10	<1,000	<10	<5	<10	<10
	8/97			<10	<10	<10	<10	<10	<1,000	<10	<6	<12	<10
	2/99			<10	<10	<10	<10	<10	<1,000	<10	<10	<10	<10 J
	3/00			<10	<10	<10	<10	<10	<1,000 J	<10	<5	<10	<10
	3/01			<10	<10	<10	<10	<10	<1,000	<10	<10	<10	<10
	4/02			<10	<5	<5	<5	<10	<1,000	<5	<5	<5	<5
	5/03			<12	<5	<5	<5	<5	<1,000	<5	<5	<5	<5
	6/04			<25	<10	<10	<10	<20	<1,000	<10	<5	<5	<10
	6/05			<5.0 J	<1.0	<5.0	<4.0	<5.0	<1,000	<1.0	<1.0	<1.0	<3.0
	6/06			<5.0	<1.0	0.5 J	<4.0	<5.0	<1,000	<1.0	<1.0	<1.0	<3.0
PZ-4S	11/89	362.79	357.88	<100	<1	<1	<1	<1	<1,000	<1	<10	<10	<1
	11/90			<100	<1	<1	<1	<1	<1,000	<1	<10	<10	<1
	11/91			<100	<1	<1	<1	<1	<1,000	<1	<10	<10	<1
	11/92			<100	<1	<1	<1	<1	<1,000	<1	<10	<10	<1
	8/95			<1,000	<5	<5	<5	<5	<1,000	<5	<5	<10	<18
	10/95			NA	<5	<5	<5	<5	NA	<5	NA	NA	<5
	8/96			<10	<10	<10	<10	<10	<1,000	<10	<5	<10	<10
	8/97			<10	<10	<10	<10	<10	<1,000	<10	<5	<10	<10
	2/99			<10	<10	<10	<10	<10	<1,000	<10	<10	<10	<10
	6/99			<10 J	<10	<10	<10	<10	<1,000 J	<10	<10 J	<10 J	<10 J
	3/00			<10	<10	<10	<10	<10	<1,000 J	<10	<5	<10	<10
	3/01			<10	<10	<10	<10	<10	<1,000	<10	<10	3 J	<10
	4/02			<14	<5	<5	<5	<10	<1,000	<5	8 (<5)[F]	<5 (<5)[F]	<5
	10/02			<25 J	<10	<10	<10	<20 J	<1,000	<10	<5[G]	<5[G]	<10
	5/03			<12	<5	<5	<5	<5	<1,000	<5	<5	<5	<5

See notes on page 15.

Table 1. Summary of Historical Groundwater Monitoring Data, March 1988 through June 2006,
2010 Biannual Process Control Monitoring Report, McKesson Envirosystems, Former Bear Street Facility, Syracuse, New York

Monitoring Well	Sampling Date	Screen Elev. (ft. AMSL) Top	Bottom	Acetone	Benzene	Toluene	Ethyl-benzene	Xylene[A]	Methanol	Trichloro-ethene	Aniline	N,N-Dimethyl-aniline	Methylene Chloride
NYSDEC Groundwater Quality Standards (Part 700)				50	1	5	5	5	NA	5	5	1	5
PZ-4S	6/04			<25	<10	<10	<10	<20	<1,000	<10	<5	<5	<10
(cont'd.)	6/05			<5.0 J	<1.0	<5.0	<4.0	<5.0	<1,000	<1.0	<1.0	<1.0	<3.0
	6/06			<5.0	<1.0	**0.6 J**	<4.0	<5.0	<1,000	<1.0	<1.0	<1.0	<3.0
PZ-5D	11/89	353.5	348.6	<100	<1	<1	<1	<1	<1,000	<1	<10	<10	<1
	12/94			<10	<5	<5	<5	<5	<200	<5	<5	<10	<5
	2/96			<1,000	<10	<10	<10	<10	<1,000	<10	<5	<10	<10
	2/97			<1,000	<10	<10	<10	<10	<1,000	<10	<5	<10	<10
	9/98			<10	<10	<10	<10	<10	<1,000	<10	<5[H]	<10	<12
	7/99			<10 J	<10 J	<10 J	<10 J	<10 J	<1,000	<10 J	<10	<10	<10 J
	9/00			<10 J	<10 J	<10 J	<10 J	<10 J	<1,000 J	<10 J	<10 J	<10	<10 J
	9/01			<10	<10	<10	<10	<10	<1,000	<10	<10	<10	<10
	10/02			<25 J	<10	<10	<10	<20 J	<1,000	<10	<5[G]	<5[G]	<10
	10/03			<12	<5	<5	<5	<10	<1,000	<5	46	<5	<5
	6/04[J]			<25	<10	<10	<10	<20	<1,000	<10	<5	<5	<10
	11/04			--	--	--	--	--	<1,000	--	<5	<5	--
	6/05			<5.0 J	<1.0	<5.0	<4.0	<5.0	<1,000	<1.0	<1.0	<1.0	<3.0
	11/05			<5.0 J	<1.0	**0.7 J**	<4.0	<5.0	<1,000	<1.0	<1.0	<1.0 J	<3.0
PZ-5S	11/89	361.42	356.52	<100	<1	<1	<1	<1	<1,000	<1	<11	<11	<1
	12/94			<10	<5	<5	<5	<5	<200	<5	<5	<10	<5
	2/96			<1,000	<10	<10	<10	<10	<1,000	<10	<5	<10	<10
	2/97			**5 J**	<10	<10	<10	<10	<1,000	<10	<5	<10	<10
	9/98			<10	<10	<10	<10	<10	<1,000	<10	<5[H]	<10	<12
	6/99			<10 J	<10	<10	<10	<10	<1,000	<10	<10 J	<10 J	<10 J
	7/99			<10 J	<10 J	<10 J	<10 J	<10 J	<1,000 J	<10 J	<10	<10	<10 J
	9/00			<10 J	<10 J	<10 J	<10 J	<10 J	<1,000 J	<10 J	<10 J	<10	<10 J
	9/01			**7 J**	<10	<10	<10	<10	<1,000	<10	<10	<10	<10
	10/02			<25 J	<10	<10	<10	<20 J	<1,000	<10	<5[G]	<5[G]	<10
	10/03			<12	<5	<5	<5	<10	<1,000	<5	<5	<5	<5
	11/04			--	--	--	--	--	<1,000	--	<5	<5	--
	6/05			<5.0 J	<1.0	<5.0	<4.0	<5.0	<1,000	<1.0	<1.1	<1.1	<3.0
PZ-5S	11/05			<5.0 J	<1.0	<5.0	<4.0	<5.0	<1,000	<1.0	<1.0	<1.0 J	<3.0
PZ-8S[I]	9/98	362.6	357.7	<10	<10	<10	<10	<10	<1,000	<10	<10	<10	<10
PZ-11D[D]	11/89	352.09	347.19	<100	<1	<1	<1	<1	<1,000	<1	<11	<11	<1
PZ-11S[D]	11/89	359.09	354.19	<100	<1	<1	<1	<1	<1,000	<1	<11	<11	<1
PZ-12D[D]	11/89	350	345.1	<100	<1	<1	<1	<1	<1,000	<1	<53	<53	<1
	11/90			<100	<1	<1	<1	<1	<1,000	<1	<10	<10	<1
	11/91			<100	<1	<1	<1	<1	**3**	<1	<10	<10	<1
	11/92			<100	<1	<1	<1	<1	<1,000	<1	<10	<10	<1
PZ-12S[D]	11/89	360	355.1	<100	<1	<1	<1	<1	<1,000	<1	<10	<10	<1
	11/90			<100	<1	<1	<1	<3	<1,000	<1	<10	<10	<1
	11/91			<100	<1	<1	<1	<3	**6**	<1	<10	<10	**5**
	11/92			<100	<1	<1	<1	<3	<1,000	<1	<10	<10	<1
PZ-13D[C]	11/89	349.4	344.4	<100	<1	<1	<1	<1	<1,000	<1	<11	<11	<1
PZ-13S[C]	11/89	359.5	354.5	<100	<1	2	<1	**2**	<1,000	<1	<11	<11	<1

See notes on page 15.

Table 1. Summary of Historical Groundwater Monitoring Data, March 1988 through June 2006,
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General Notes:

1. Concentrations are presented in micrograms per liter, which is equivalent to parts per billion.
2. Compounds detected are indicated by bold-faced type.
3. Detections exceeding New York State Department of Environmental Conservation (NYSDEC) Groundwater Standards (Part 700) are indicated by shading.
4. Replacement wells for MW-6, MW-8, MW-9, MW-10, MW-11 and MW-12D were installed 8/95.
5. Replacement wells for MW-17, MW-24S, MW-24D and TW-02 were installed 11/97 - 12/97.
6. The laboratory analytical results for the duplicate sample collected from monitoring well MW-23S during the 7/99 sampling event indicated the presence of methanol at 5.1 milligrams per liter. Because methanol was not detected in the original sample, the duplicate results were determined, based on the results of the data validation process, to be unacceptable. Furthermore, methanol has not been previously detected in groundwater samples collected from this monitoring well. Accordingly, the detection of methanol appears to be the result of a laboratory error and not representative of actual groundwater quality in the vicinity of monitoring well MW-23S.
7. N,N-dimethylaniline data for 10/02 sampling event for MW-1, MW-3S, MW-28, MW-29, MW-32, MW-35 and TW-01 were rejected due to matrix spike and matrix spike duplicate recoveries below control limits. Aniline and N,N-dimethylaniline data for 10/02 sampling event for MW-30 were rejected due to matrix spike and matrix spike duplicate recoveries below control limits. These wells and piezometers are not perimeter monitoring locations and were not resampled.
8. Aniline and N,N-dimethylaniline results of nondetect for the 6/04 sampling event at MW-18 were rejected due to the deviation from a surrogate recovery that was below 10%. This well was not resampled.
9. Volatile organic compound (VOC) results for the 11/04 sampling event were inadvertently lost due to laboratory equipment failure for monitoring locations MW-1, MW-17R, MW-18, MW-23I, MW-23S, MW-24DR, MW-24SR, MW-25, MW-33, PZ-5D and PZ-5S. In addition, the initial VOC results were also irretrievable due to laboratory equipment failure for monitoring locations MW-27, MW-28, MW-29 and MW-30; however, results for subsequent dilutions of these groundwater samples were valid, but the detection limits were high. The duplicate sample VOC results for MW-27 and MW-28 have lower detection limits and are presented in parentheses. These wells were not resampled.

Superscript Notes:

[A] = Data presented is total xylenes (m- and p-xylenes and o-xylenes). For the 1995 data, the listed quantitation limit applies to the analyses conducted for m- and p-xylenes and o-xylenes.

[B] = Because aniline was detected at monitoring well MW-3S at a concentration of 690 ug/l during the September 2001 sampling event, this well was resampled for aniline on November 8, 2001. Aniline was detected in MW-3S during the November 8, 2001 resampling event at a concentration of 69 ug/l.

[C] = Wells/piezometers MW-5, MW-14D, MW-16D, MW-17, MW-20, MW-21, MW-24S, MW-24D, TW-02, PZ-13S, and PZ-13D were abandoned 11/97 - 1/98.

[D] = Wells/piezometers MW-6, MW-7, MW-8, MW-9, MW-10, MW-11, MW-12D, PZ-11D, PZ-11S, PZ-12D, and PZ-12S were abandoned during OU No.1 soil remediation activities (1994).

[E] = Wells MW-8S, MW-8D, and TW-02R were abandoned in 8/04 and replacement wells MW-8SR and TW-02RR were installed in 8/04.

[F] = MW-17R, MW-18, and PZ-4S wells/piezometers were resampled for aniline and N,N-dimethylaniline on June 18, 2002 because N,N-dimethylaniline and/or aniline was detected during the April 2002 sampling event. The results of this additional sampling event are shown in parenthesis. MW-24SR and MW-24DR were also sampled for aniline and N,N-dimethylaniline on June 18, 2002, because N,N-dimethylaniline and/or aniline was detected at nearby perimeter monitoring locations during the April 2002 sampling event.

[G] = MW-17R, MW-18, MW-19, MW-23S, MW-23I, MW-24DR, MW-24SR, MW-25S, PZ-4S, PZ-5S and PZ-5D wells/peizometers were resampled for aniline and N,N-dimethylaniline during 1/03, because the 10/02 results were rejected due to matrix spike and matrix spike duplicate recoveries below control limits. These wells and piezometers are perimeter monitoring locations.

[H] = MW-18, MW-19, MW-23I, MW-23S, MW24DR, MW-24SR, MW-28, PZ-5S and PZ-5D wells/piezometers were resampled for aniline during 12/98, because the 9/98 results were rejected due to laboratory error.

[I] = Piezometer PZ-8S was decommissioned 8/00.

[J] = MW-24SR and PZ-5D well and piezometer were sampled during the June 2004 sampling event because N,N-dimethylaniline and/or aniline was detected at nearby perimeter monitoring locations dunng the October 2003 sampling event.

Abbreviations:

AMSL = Above mean sea level (NGVD of 1929).
NA = Not available.
ND = Not detected.
NS = Not sampled.

Analytical Qualifiers:

D = Indicates the presence of a compound in a secondary dilution analysis.
J = The compound was positively identified; however, the numerical value is an estimated concentration only.
E = The compound was quantitated above the calibration range.
JN = The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification. The associated numerical value is an estimated concentration only.
B = The compound has been found in the sample as well as its associated blank, its presence in the sample may be suspect.
< = Compound was not detected at the listed quantitation limit.
U = Undetected.
R = The sample results were rejected.
-- = Sample results are not available. (See Note 9.)

Table 2. Summary of Historical Groundwater Level Measurements, June 1998 through June 2006,
2010 Biannual Process Control Monitoring Report, McKesson Envirosystems, Former Bear Street Facility, Syracuse, New York

Location	Reference Elevation (feet AMSL)	6/10/98 Static	6/22/98	7/6/98	7/20/98 Week 1	7/27/98 Week 2	8/5/98 Week 3	8/10/98 (morning) Week 4	8/10/98 (afternoon) Week 4	8/11/98 (morning) Week 4	8/11/98 (afternoon) Week 4	8/12/98 (morning) Week 4	8/12/98 (afternoon) Week 4	10/16/98 Week 13	11/17/98 Week 18
Canal	393.39*	362.91	363.37	363.72	363.08	363.08	362.94		362.78	362.94			362.84	363.27	
Collection Sump	372.81	364.33	363.08	363.68	362.50	361.31	361.83	361.89	362.14	361.00	361.71	361.95	362.31	362.01	361.48
MW-3S	376.54	365.93	366.26	367.82	366.20			365.29							365.25
MW-3D	375.56	365.63	365.87	366.16			364.97	364.85						365.08	365.00
MW-6D	377.07	365.75	366.01	366.29										365.25	365.15
MW-8D	374.68	365.51	365.74	366.05			364.80		364.67	364.79	364.88	364.87	364.87	364.93	364.83
MW-9D	376.76**	365.78					365.14	365.10						365.25	365.16
MW-11D	373.68	365.46	365.67	365.29			364.62	364.49	364.50	364.62		364.69	364.67	364.77	364.68
MW-11S	373.50	364.88	364.62	365.11	364.12	363.70	363.58	363.52	363.58	363.73		363.69	363.74	363.74	363.69
MW-18	372.57	362.64													361.90
MW-19	376.00	362.42													361.78
MW-23I	372.77	365.04	365.34	365.72			364.34		364.45	364.16			364.43	364.43	364.34
MW-23S	372.61	363.99	363.43	364.04	362.92	362.50	362.41		362.40	362.66		362.54	362.67	362.68	362.56
MW-24DR	375.14	365.41													364.63
MW-24SR	375.55	365.15	365.32	365.66	364.91	364.45	364.27		364.20				364.36	364.47	364.37
MW-25D	373.67	365.43													364.74
MW-25S	373.39	363.91	363.64	364.14	363.21	362.95	362.75		362.75			362.89	362.96	363.01	362.89
PZ-4D	376.11	365.46	365.73	366.01	365.21	364.83	364.63		364.54	364.67	364.75	364.74	364.70	364.80	364.69
PZ-5D	375.58	365.66	365.91	366.18	365.36	365.07	364.84		364.76	364.88	364.94	364.93	364.91	364.99	364.89
PZ-8D	375.83	365.90	366.11	366.35			365.25	365.13	365.83					365.35	365.27
PZ-9D	377.29	365.73					365.47	365.28						365.12	365.03
PZ-A	373.94	364.49	363.69	364.28	363.13	362.58	362.56	362.62	362.76	363.39	362.82	362.64	363.02	362.75	362.56
PZ-B	373.92	364.49	363.60	364.21	363.02	362.62	362.50	363.26	362.71	363.00	362.97	362.59	363.01	362.67	362.54
PZ-C	374.85	365.69	366.29	367.02	365.93	365.97	365.47	365.38	365.30	365.54	365.99	365.53	365.54	365.56	365.52
PZ-D	375.12	365.78	366.25	366.99	365.99	365.91	365.53	365.37	365.30	365.53	366.06	365.58	365.67	365.59	365.55
PZ-E	374.12	364.75	364.25	364.86	363.73	364.00	363.41	363.61	363.54	364.22	364.67	364.67	364.08	363.57	363.67
PZ-F	377.06	366.17					365.56	365.50						365.37	365.27
PZ-G	377.16	366.21					365.66	365.60						365.46	365.36
PZ-HR	376.99	366.16					365.54							365.44	365.34
PZ-I	375.15	366.56					365.86	365.64						365.88	365.57
PZ-J	374.89	366.15					365.53	365.40						365.53	365.39
PZ-K	373.19	364.53	363.78	364.35	363.27	362.69	362.69	362.71	362.75	362.92	362.80	362.78	362.98	362.82	362.66
PZ-L	374.62	364.25	363.59	364.18	363.04	362.42	362.48	362.44		362.88	362.63	362.57	362.84	362.65	362.40
PZ-M	374.35	364.70	364.09	364.64	363.52	362.96	362.96	362.96	363.09	363.29	363.15	363.05	363.30	363.12	362.93
PZ-N	376.94***	365.79	366.37	367.06	365.99	365.91	365.53	365.39	365.33	365.55	365.97	365.58	365.59	365.59	365.55
PZ-O	375.36	364.29	363.68	364.29	363.21	362.84	362.72	362.87	362.78	363.05	362.97	362.80	363.03	362.81	362.74
PZ-P	376.89	366.25					365.65	365.60						365.52	365.39
PZ-Q	377.61	366.23					365.64	365.57						365.45	365.35
PZ-R	377.05	366.23		366.94			365.65	365.57						365.50	365.38
PZ-S	378.13	366.19					365.57	365.52						365.43	365.35
PZ-T	376.25	366.14					365.54	365.43						365.52	365.38
PZ-U	375.35	365.99		366.81			365.50	365.33						365.37	365.30
PZ-V	375.78	366.07					365.48	365.35						365.43	365.29
PZ-W	375.78	366.07					365.46	365.31						365.41	365.28

See notes on page 4.

Table 2. Summary of Historical Groundwater Level Measurements, June 1998 through June 2006,
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Location	Reference Elevation (feet AMSL)	12/16/98 Week 22	12/22/98 Week 23	1/6/99 Week 25	1/13/99 Week 26	4/14/99 Week 39	6/3/99 Week 46	7/13/99 Week 52	3/27/00	6/1/00	9/18/00	11/14/00	3/19/01	9/24/01	4/15/02
Canal	393.39*	363.14	362.21	363.11			363.22	362.78	363.73	363.75	362.75^	363.24	363.01	362.96	364.59
Collection Sump	372.81	361.75	363.09	361.93	361.73	363.17	362.45	361.87	362.99	361.48	361.69	361.66	361.59	362.04	362.27
MW-3S	376.54	365.67	366.81	365.67	365.25		365.26		357.10						367.70
MW-3D	375.56	365.04		365.04	364.91	365.41	364.92	364.57	355.64	365.57	364.81	355.16	365.40	364.54	364.16
MW-6D	377.07	365.23	365.36	365.23	365.06	365.62	365.12	364.79	365.85	365.77	364.97	365.34	365.64	364.75	364.22
MW-8D	374.68	364.86		364.88	364.74	365.22	364.77	364.35	365.42	365.36	364.62	364.94	365.18	364.34	364.13
MW-9D	376.76**	365.22	365.36	365.26	365.08	365.65	365.17	364.83	365.88	365.80	365.01	365.36	365.68	364.76	364.05
MW-11D	373.68	364.73		364.73	364.57	365.02	364.60	364.18	365.24	365.18	364.46	364.81	364.96	364.18	364.07
MW-11S	373.50	363.69	364.27	363.79	363.61	364.50	363.88	363.39	364.72	364.35	363.55	363.86	364.48	363.33	363.57
MW-18	372.57	361.93	362.05	362.05	361.84	362.18	361.79	361.38	362.43	361.77	361.71	362.08	362.17	361.50	361.65
MW-19	376.00	361.84	361.98	361.87	361.89	362.15	361.80	361.46	362.58	361.88	361.90	362.25	362.44	361.82	361.83
MW-23I	372.77	364.36		364.47	364.26	364.69	364.28	363.83	364.99	364.93	364.25	364.58	364.73	363.99	363.99
MW-23S	372.61	362.52	363.35	362.66	362.46	363.64	362.94	362.42	363.85	363.17	362.64	362.87	363.59	362.36	363.97
MW-24DR	375.14	364.67	364.81	364.69	364.54	364.96	364.49	364.09	365.19	364.60	364.39	364.77	364.91	364.16	364.06
MW-24SR	375.55	364.44	364.66	364.50	364.33	364.87	364.41	363.95	365.12	365.55	364.30	364.60	364.86	364.05	364.00
MW-25D	373.67	364.76		364.77	364.64	365.07	364.64	364.20	365.28	365.20	364.51	364.84	364.97	364.22	364.19
MW-25S	373.39	362.87	363.48	362.96	362.79	363.89	363.20	364.75	364.12	363.69	362.94	363.23	364.14	362.61	364.39
PZ-4D	376.11	364.73	364.87	364.72	364.55	365.02	364.60	364.22	365.28	365.21	364.49	364.82	365.03	364.22	364.06
PZ-5D	375.58	364.93	365.09	364.94	364.78	365.28	364.86	364.47	365.57	365.48	364.71	365.10	365.36	364.46	364.12
PZ-8D	375.83	365.33	365.48	365.33	365.19	365.78	365.08	365.00							
PZ-9D	377.29	365.08	365.24		364.94	365.50	365.04	364.68	365.70	365.72	364.87	365.16	365.55	364.60	363.75
PZ-A	373.94	362.60	364.04	362.72	362.56	363.81	363.12	362.61	363.95	363.15	362.75	362.91	363.56	362.58	363.92
PZ-B	373.92	362.51	364.27	362.62	363.45	363.91	363.19	362.67	364.08	363.32	362.79	362.94	363.94	362.55	364.44
PZ-C	374.85	365.52	365.97	365.18	365.02	365.79	365.10	364.75	366.04	366.04	365.03	365.35	366.39	364.54	365.68
PZ-D	375.12	365.53	366.06	365.25	365.12	365.79	365.18	364.89	366.09	366.10	365.10	365.46	366.36	364.65	365.58
PZ-E	374.12	363.53	366.41	363.57	363.52	364.93	364.20	363.81	365.16	365.03	363.92	364.40	365.90	363.49	366.51
PZ-F	377.06	365.52	365.73	365.62	365.27	366.36	365.53	365.11	366.89	366.72	365.27	365.70	367.06	364.93	365.50
PZ-G	377.16	365.60	365.76	365.71	365.44	366.44	365.61	365.17	366.89	366.80	365.36	365.75	367.11	364.93	365.39
PZ-HR	376.99	365.54	365.84	365.60	365.39	366.34	365.55	365.11	366.80	366.68	365.33	365.66	367.02	364.91	365.39
PZ-I	375.15	365.90	366.59	366.05	365.76	366.93	365.79	365.23	367.30	367.23	365.55	366.08	367.81	364.91	366.29
PZ-J	374.89	365.55	365.93	365.59	365.47	366.21	365.53	365.14	366.55	366.50	365.32	365.64	366.69	364.96	365.10
PZ-K	373.19	362.66	363.70	362.78	362.58	363.87	363.13	362.59	363.97	363.19	362.69	362.86	363.53	362.49	363.82
PZ-L	374.62	362.51	363.59	362.65	362.45	363.69	363.00	362.47	363.84	363.03	362.61	362.68	363.42	362.47	363.44
PZ-M	374.35	363.01	364.07	363.13	362.94	364.06	363.40	362.90	364.22	363.54	363.05	363.24	363.86	362.90	363.93
PZ-N	376.94***	365.56	366.09	365.31	365.12	365.87	365.19	364.87	366.17	366.12	NM	365.35	366.43	364.47	366.60
PZ-O	375.36	362.75	363.74	362.87	362.68	364.01	363.25	362.73	364.22	363.57	362.86	363.06	364.22	362.64	364.47
PZ-P	376.89	365.61	365.78	365.73	365.44	366.43	365.59	365.18	366.85	366.73	365.34	365.77	367.02	364.93	365.31
PZ-Q	377.61	365.59	365.70	365.71	365.42	366.44	365.60	365.16	366.93	366.78	365.26	365.76	367.21	364.89	366.11
PZ-R	377.05	365.61	365.81	365.67	365.47	366.46	365.61	365.20	366.89	366.81	365.37	365.72	367.21	364.93	365.40
PZ-S	378.13	365.57	365.94	365.65	365.40	366.39	365.56	365.15	366.84	366.73	365.32	365.71	367.12	364.90	365.27
PZ-T	376.25	365.58	365.96	365.64	365.47	366.34	365.53	365.10	366.71	366.65	365.29	375.70	366.90	364.90	365.34
PZ-U	375.35	365.49	365.91	365.55	365.40	366.17	365.46	365.08	366.55	366.49	365.22	365.60	366.75	364.85	365.18
PZ-V	375.78	365.47	365.90	365.52	365.37	366.20	365.44	365.06	366.54	366.50	365.25	365.58	366.76	364.83	365.30
PZ-W	375.78	365.44	365.78	365.53	365.33	366.15	365.41	365.02	366.49	366.41	365.20	365.59	366.63	364.85	365.05

See notes on page 4.

Table 2. Summary of Historical Groundwater Level Measurements, June 1998 through June 2006,
2010 Biannual Process Control Monitoring Report, McKesson Envirosystems, Former Bear Street Facility, Syracuse, New York

Location	Reference Elevation (feet AMSL)	6/3/02	6/18/02	10/7/02	1/20/03	5/5/03	10/27/03	6/14/04	11/1/04	6/6/05	10/31/05	6/5/06
Canal	393.39*	363.64	364.17	362.19	^^	363.34	363.34	363.39	363.39	364.39^^^	363.84	363.69
Collection Sump	372.81	361.50	361.42	362.05	361.90	361.91	361.86	362.11	362.00	361.49	362.96	361.70
MW-3S	376.54	366.26	367.50	364.26	366.27	366.38	366.98	366.65	365.54	365.82	368.11	368.19
MW-3D	375.56	364.55	365.10	363.92	365.10	365.53	365.05	365.59	365.27	365.36	366.25	366.07
MW-6D	377.07	364.62	365.21	364.07	365.31	365.75	365.24	365.80	365.46	365.59	366.45	366.29
MW-8D	374.68	364.51	365.01	363.82	^^	365.30	364.83	365.39				
MW-9D	376.76**	364.47	365.10	364.00	365.31	365.79	365.26	365.85	365.51	365.64	366.47	366.34
MW-11D	373.68	364.44	364.92	363.73	364.81	365.17	364.75	365.26	364.93	364.00	365.94	365.78
MW-11S	373.50	363.89	364.33	363.09	364.15	364.38	363.89	364.34	363.98	364.12	365.06	365.04
MW-18	372.57	362.09	362.50	361.37	362.26	362.69	362.26	362.62	362.29	362.37	363.17	363.07
MW-19	376.00	362.11	362.57	361.51	362.52	361.91	362.46	362.89	362.59	362.69	363.50	363.38
MW-23I	372.77	364.34	364.80	363.62	364.60	365.01	364.56	364.99	364.67	364.77	365.66	365.47
MW-23S	372.61	363.38	363.68	362.50	362.26	363.31	362.81	363.04	362.77	362.80	364.05	363.80
MW-24DR	375.14	364.43	364.90	363.71	364.75	365.13	364.69	365.19	364.86	364.94	365.90	365.74
MW-24SR	375.55	364.40	364.86	363.64	364.69	365.03	364.62	365.12	364.78	364.88	365.81	365.66
MW-25D	373.67	364.57	365.02	363.82	364.82	365.24	364.74	365.26	364.93	365.00	364.49	365.77
MW-25S	373.39	363.83	364.21	362.74	363.61	363.67	363.19	363.49	363.08	363.14	365.63	364.13
PZ-4D	376.11	364.43	364.94	363.73	364.81	365.23	364.78	365.28	364.96	365.07	365.96	365.85
PZ-5D	375.58	364.47	365.03	363.81	365.05	365.49	365.02	365.53	365.20	365.29	365.19	365.98
PZ-8D	375.83											
PZ-9D	377.29	364.14	364.79	363.71	365.08	365.64	365.09	365.68	365.35	365.48	366.33	366.19
PZ-A	373.94	363.05	363.22	362.59	^^	363.40	363.57	363.18	362.89	362.96	364.20	364.14
PZ-B	373.92	363.24	363.40	362.65	363.39	363.47	363.89	363.21	362.92	362.92	364.32	364.32
PZ-C	374.85	365.38	366.26	364.19	365.65	365.76	365.44	366.07	365.50	365.65	366.65	366.45
PZ-D	375.12	365.41	366.21	364.21	365.65	365.84	365.53	366.11	365.62	365.75	366.75	366.57
PZ-E	374.12	364.63	364.77	363.47	364.94	365.00	366.92	364.58	364.07	364.47	365.25	366.51
PZ-F	377.06	365.51	366.29	364.29	366.25	366.41	365.46	366.65	365.75	366.13	367.59	367.16
PZ-G	377.16	365.53	366.22	364.36	366.35	366.46	365.43	366.68	365.81	366.14	367.76	366.97
PZ-HR	376.99	365.46	366.19	364.24	366.22	366.41	365.50	366.62	365.81	366.12	367.56	367.14
PZ-I	375.15	366.16	367.05	364.22	366.58	366.90	365.97	367.01	365.26	366.41	368.02	367.82
PZ-J	374.89	365.18	365.89	364.21	365.96	366.73	365.61	366.45	365.86	366.07	367.29	367.04
PZ-K	373.19	363.19	363.48	362.56	363.25	363.36	363.12	363.13	362.84	362.97	364.21	364.01
PZ-L	374.62	362.96	363.26	362.53	363.42	363.25	363.06	363.04	362.79	362.91	364.02	363.89
PZ-M	374.35	363.37	363.62	362.82	363.60	363.77	363.66	363.61	363.31	363.45	364.53	364.40
PZ-N	376.94***	365.29	366.13	364.09	365.54	365.74	364.48	365.95	365.47	365.53	366.56	366.41
PZ-O	375.36	363.63	363.98	362.75	363.61	363.53	363.36	363.43	363.04	363.13	364.36	364.26
PZ-P	376.89	365.48	366.19	364.25	366.25	366.45	365.53	366.65	365.87	366.20	367.63	367.19
PZ-Q	377.61	365.70	366.41	364.41	366.40	366.55	365.38	366.77	365.85	366.21	367.80	367.16
PZ-R	377.05	365.58	366.31	364.31	366.34	366.46	365.31	366.72	365.85	366.17	367.73	367.15
PZ-S	378.13	365.53	366.29	364.31	366.29	366.42	365.42	367.18	367.10	366.31	367.83	367.20
PZ-T	376.25	365.37	366.10	364.20	366.16	366.38	365.74	366.54	365.85	366.13	367.48	367.15
PZ-U	375.35	365.23	365.96	364.18	366.00	365.83	365.66	366.43	365.82	366.05	367.33	367.07
PZ-V	375.78	365.24	365.97	364.15	365.98	366.71	365.84	366.44	365.76	365.99	367.33	367.06
PZ-W	375.78	365.12	365.86	364.09	365.68	366.18	365.49	366.36	365.72	365.98	367.21	366.94

See notes on page 4.

Table 2. Summary of Historical Groundwater Level Measurements, June 1998 through June 2006,
2010 Biannual Process Control Monitoring Report, McKesson Envirosystems, Former Bear Street Facility, Syracuse, New York

Notes:

1. Weeks 1, 2, 3, 4, 13, 18, 22, 23, 25, 26, 39, 46 and 52 are weeks after the initial introduction of Revised Anaerobic Mineral Media (RAMM) into the three impacted areas.
2. 8/10, 8/11, and 8/12/98 water level measurements were taken during the initial discrete RAMM injection event.
3. AMSL = above mean sea level (NGVD of 1929)
4. The groundwater level in PZ-8D was not measured on 3/27/00 and 6/1/00 because this piezometer was damaged and subsequently decommissioned on August 30, 2000.
5. ^ = The canal water-level measurement for the third quarter of the first year of the long-term process control monitoring program was obtained on September 29, 2000.
6. * = The reference elevation for canal gauging point was 363.06 feet AMSL prior to 11/16/00. The canal gauging point was re-marked and re-surveyed 11/16/00. The new reference elevation is 393.39 feet AMSL.
7. NM = The groundwater level in PZ-N was not measured on 9/18/00 because this piezometer was damaged. This piezometer was repaired and subsequently resurveyed on 11/16/00. The new reference elevation for PZ-N is 376.94 feet AMSL.
8. 376.76** = The reference elevation for MW-9D as of 9/19/01.
9. *** = The reference elevation for PZ-N was 376.02 feet AMSL prior to 11/16/00 and, as noted above, the new reference elevation is 376.94 feet AMSL.
10. ^^ = Due to frigid weather conditions, the groundwater level in PZ-A and MW-8D could not be measured on 1/20/03, because the locks were frozen. The canal water level for the 1/03 resampling event could not be measured due to strong winds and ice on the water surface.
11. Monitoring location MW-8D was decommissioned on August 3, 2004.
12. The canal water level measurement for the 2005 second quarter long-term process control monitoring program was obtained on November 1, 2005.
13. ^^^ = The water level measurement of the canal collected during the first 2005 monitoring was not measured from the correct measuring point. Tha spring 2005 measurement was taken approximately 3 feet higher than the surveyed measuring point. This value reflects the corrected canal water level for the spring 2005 monitoring event.

MW-35

Date	9/98	7/99	3/00	9/00	3/01	9/01	4/02	10/02	5/03
Benzene	<10	0.7 J	<10	<10 J	<10	<10	<5	<10	<5
Aniline	6 J	3 J	<10	<10	<10	<10	3 J	2 J	1,000
N,N-dimethylaniline	5 J	4 J	2 J	3 J	<10	2 J	4 J	R	<100
Acetone	<10	<10	<10 J	<10 J	<10	<10	<13	<25	<12

MW-36

Date	9/98	2/99	7/99	3/00	9/00	3/01	9/01	4/02	10/02	5/03
Acetone	<10	<10	8 J	<10 J	5 J	<10	54	<20	12 J	9 J
Benzene	<10	<10	0.8 J	<10	<10 J	<10	<10	<5	<10	<5
Aniline	290 D	860 D	250	60	8 J	<10	350 D	9	2 J	67
N,N-dimethylaniline	6 J	4 J	<10	7 J	6 J	<10	5 J	41	2 J	4 J
Methylene Chloride	<10	<10	<10	<10	2 J	<10	<10	<5	<10	<5

TW-02R

Date	12/96	9/98	2/99	7/99	3/00	9/00	3/01	9/01	4/02	10/02	5/03
Acetone	53	<500 J	<1,000	630	<1,000 J	190 J	81	57	240	110 J	240
Benzene	10	<500 J	<1,000	37	<1,000	28 J	19	25	19	15	30
Toluene	77	<500 J	190 J	240 J	160 J	95 J	68	70	65	19	130
Ethylbenzene	16	<500 J	<1,000	31	<1,000	35 J	28	31	23	23	49
Xylene	65	140 J	150 J	150	240 J	160 J	130	140	96	65	226
Methanol	<1,000	5,000	14,000 JN	<1,000	<1,000 J	<1,000	<1,000	<1,000 J	<1,000	<1,000	<1,000
Trichloroethene	585 D	300 J	<1,000	55	<1,000	6 J	<10	<20	<5	<10	<5
Aniline	15,900 JD	38,000 D	83,000 D	100,000 D	64,000 D	79,000	67,000 D	63,000 D	1,090,000 D	80,000 D	160,000 D
N,N-dimethylaniline	3,920 D	61,000 D	7,900	3,500 J	3,900	<10,000	650 J	32	<5,300	10 J	230
Methylene Chloride	42,449 D	86,000 D	14,000 B	9,700 D	13,000	390 J	400 D	48 B	14	<10	97

MW-34

Date	9/98	7/99	3/00	9/00	3/01	9/01	4/02	10/02	5/03
Acetone	<10	2 J	<10 J	<10 J	<10	7 J	<32	37 J	16
Benzene	<10	0.9 J	1 J	<10 J	<10	2 J	<5	<10	<5
Toluene	<10	1 J	2 J	<10 J	2 J	2 J	<5	<10	<5
Xylene	<10	<10	<10	<10 J	2 J	2 J	<10	<20	<10
Aniline	83	380 D	200 D	320 D	700 D	76	640 D	380 DJ	140
N,N-dimethylaniline	<10	2 J	3 J	4 J	5 J	3 J	15	2 J	3 J

TW-01

Date	12/96	9/98	2/99	7/99	3/00	9/00	3/01	9/01	4/02	10/02	5/03
Benzene	82	15	24	16	16	11 J	5 J	10	3 J	7 J	7
Toluene	4 J	<10	2 J	1 J	<10	<10 J	<10	<10	<5	<10	<5
Ethylbenzene	6 J	4 J	2 J	3 J	<10	<10 J	<10	<10	<5	<10	<5
Xylene	4 J	<10	2 J	<10	<10	<10 J	<10	<10	<10	<20	<10
Aniline	2,090 D	4,400 DEJ	9,000 D	4,400 D	280 D	15	<10	<10	8	<5	<5
N,N-dimethylaniline	13	4 J	5 J	4 J	4 J	2 J	3 J	2 J	13	R	1 J
Methylene Chloride	4 J	<10	<10	<10	<10	<10 J	<10	<10	<5	<10	<5
Acetone	<10	<10	<10	<10	<10	<10 J	<10	<10	<14	<25	<12

MW-31

Date	9/98	7/99	3/00	9/00	3/01	9/01	4/02	10/02	5/03
Acetone	<10	<10	<10	<10 J	21	<10	<14	<25	<12
Benzene	12	16	16	12 J	11	14	9	11	9
Aniline	34	230 D	3 J	10	<10	91 D	804 D	560 D	0.9 J
N,N-dimethylaniline	4 J	3 J	4 J	6 J	5 J	3 J	21	1 J	3 J

MW-9S

Date	1/89	11/89	11/91	8/95	7/99	3/00	9/00	3/01	9/01	4/02	10/02	5/03
Acetone	1,600	<1,000	<100	<1,000	<10	<10	<10 J	<10	<10	<23	16 J	<12
Benzene	NA	48	<10	11 JS	4 J	2 J	11 J	1 J	10	10	38	11
Toluene	64	25	9	26 JD	2 J	2 J	2 J	3 J	3 J	2 J	40	<5
Ethylbenzene	130	60	19	69 D	9 J	11	6 J	17	7 J	8	2 J	7
Xylene	270	80	30	226 JD	18	21	18 J	61	35	17 J	15 J	18
Methanol	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000 J	<1,000	<1,000	<1,000 J	370 J	<1,000	<1,000
Aniline	660	670	95	50	<10	2 J	1 J	2 J	<10	9	<5	0.9 J
N,N-dimethylaniline	1,200	150	18	28	5 J	9 J	8 J	11	10	43	2 J	3 J
Methylene Chloride	1,500	<10	<1	110 D	<10	<10	<10 J	<10	<10	<5	<10	<5

MW-32

Date	9/98	7/99	3/00	9/00	3/01	9/01	4/02	10/02	5/03
Acetone	<10	3 J	<10	<10 J	<10	<10	<15	<25	<12
Benzene	16	14	5 J	12 J	5 J	10	4 J	4 J	<5
Toluene	2 J	2 J	<10	<10 J	<10	<10	<5	<10	<5
Ethylbenzene	5 J	4 J	<10	<10 J	<10	<10	<5	<10	<5
Xylene	3 J	<10	<10	<10 J	<10	<10	<10	<20	<10
Trichloroethene	<10	56	<10	<10 J	<10	<10	<5	<10	<5
Aniline	6,300 D	<10	800 D	4,500 D	1,900 D	1,100 D	4,820 D	50	0.6 J
N,N-dimethylaniline	4 J	3 J	<10	<10	2 J	2 J	11	R	0.7 J

MW-33

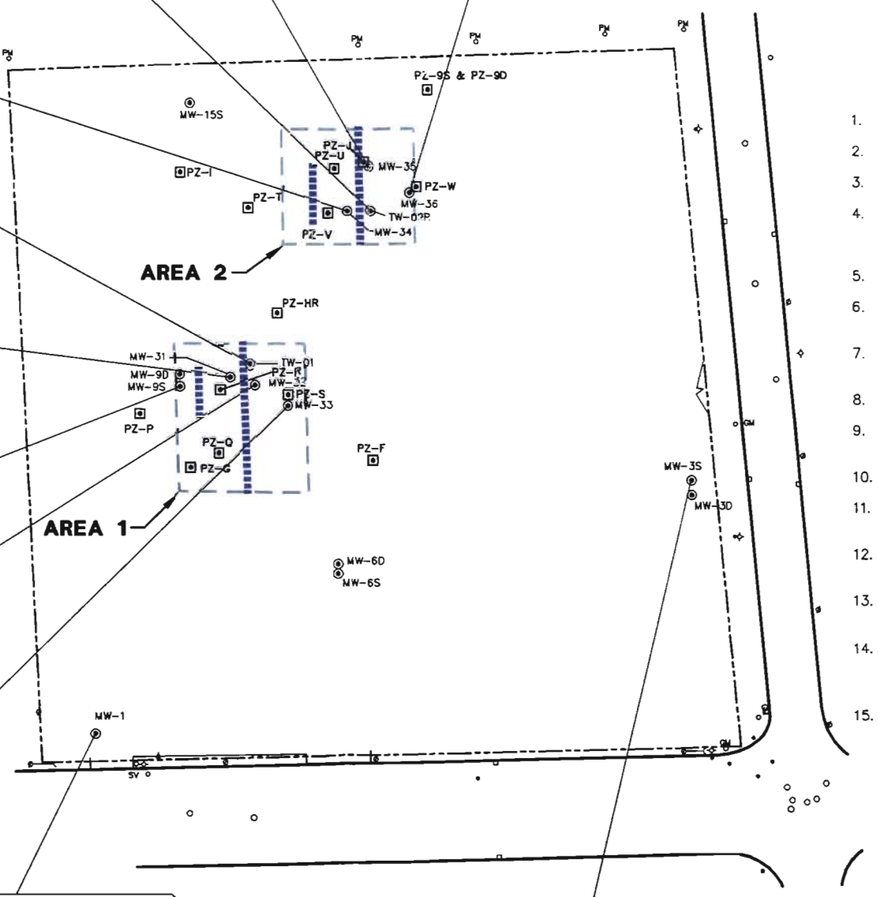
Date	9/98	2/99	7/99	3/00	9/00	3/01	9/01	4/02	10/02	5/03
Acetone	<10	<10	5 J	<10 J	45 J	17 J	21	<18	11 J	88
Benzene	<10	<10	2 J	<10	4 J	<20	5 J	3 J	4 J	13
Toluene	<10	<10	0.7 J	<10	1 J	<20	<10	<5	<10	<5
Aniline	9 J	120	130	91	540 D	1,300 D	1,900 D	2,780 D	290 D	2,000
N,N-dimethylaniline	6 J	6 J	8 J	7 J	23	16	12	21	3 J	35 J
Methylene Chloride	<10	<10	5 J	11	330 DJ	370 B	<18	19	4 J	2,900 D

MW-1

Date	3/88	1/89	11/89	11/90	11/91	11/92	8/95	9/98	7/99	3/00	9/00	3/01	9/01	4/02	10/02	5/03
Acetone	<100	<100	<100	<100	<100	<100	<1,000	<10	0.7 JN	<10	8 J	<10	<10	<12	<25	<12
Toluene	<1	<1	<1	<1	<1	<1	<5	<10	<10	<10	3 J	<10	<10	<5	<10	<5
Xylene	<1	<1	<1	<3	<3	<3	<5	<10	<10	<10	5 J	<10	<10	<10	<20	<10
Methylene Chloride	<1	<1	<1	<1	<1	<1	<10	<10	<10	<10	<10 J	10	<10	<5	<10	<5
Methanol	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000 J	<1,000	<1,000	<1,000 J	990 J	<1,000	<1,000
Aniline	<10	<11	<10	<10	<10	<10	<5	<10	<10	<5	<10 J	<10	<10	<5	<5	<5

MW-3S

Date	3/88	1/89	11/89	11/91	8/95	9/98	7/99	3/00	9/00	3/01	9/01	4/02	10/02	5/03
Acetone	<100	<10,000	<10,000	2,900	<1,000	<10	<10	<10 J	<10 J	<10	<10	<12	<25	<12
Benzene	<1	<100	<100	10	<5	<10	1 J	<10	1 J	<10	3 J	<5	<10	<5
Toluene	<1	120	<100	19	<5	<10	0.7 J	<10	2 J	<10	8 J	<5	<10	<5
Ethylbenzene	<1	<100	<100	4	<5	<10	<10	<10	<10 J	<10	1 J	<5	<10	<5
Xylene	<1	<100	<100	31	<5	<10	<10	<10	<10 J	<10	2 J	<10	<20	<10
Methanol	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000 J	<1,000	<1,000	<1,000 J	370 J	<1,000	<1,000
Trichloroethene	50	1,190	100	<10	<5	<10	<10	<10	<10 J	<10	<10	<5	<10	<5
Aniline	<10	<11	<52	790	15	<10	9 J	<10	2 J	<10	890 D (69*)	1.7 J	<5	<5
N,N-dimethylaniline	<10	5,670	440	170	2 J	<10	<10	<10	1 J	<10	4 J	<5	R	<5
Methylene Chloride	110	4,700	2,700	<10	<10	<10	<10	<10	<10 J	<10	<10	<5	<10	<5



LEGEND:

- UTILITY POLE
- CATCH BASIN
- PETROLEUM PIPE LINE MARKER
- GAS LINE MARKER
- SEWER VENT
- HYDRANT
- WATER VALVE
- MANHOLE
- PROPERTY LINE
- MW-19 GROUNDWATER MONITORING WELL
- PZ-A PIEZOMETER
- APPROXIMATE BOUNDARY OF AREA
- GROUNDWATER INFILTRATION TRENCH

SAMPLE IDENTIFICATION

MW-35

Date	9/98	7/99	3/00	9/00	3/01	9/01	4/02	10/02	5/03
Benzene	<10	0.7 J	<10	<10 J	<10	<10	<5	<10	<5
Aniline	6 J	3 J	<10	<10	<10	<10	3 J	2 J	1,000
N,N-dimethylaniline	5 J	4 J	2 J	3 J	<10	2 J	4 J	R	<100
Acetone	<10	<10	<10 J	<10 J	<10	<10	<13	<25	<12

CONCENTRATION (ppb)

NOTES:

1. REPLACED MONITORING WELLS ARE IDENTIFIED WITH AN "R" (e.g., MW-24DR).
2. TRENCH LOCATIONS ARE APPROXIMATE.
3. MONITORING LOCATIONS ARE APPROXIMATE.
4. FIGURE ONLY SHOWS COC CONCENTRATIONS AT MONITORING LOCATIONS WITHIN THE IMPACTED AREAS AND THE CHEMICAL PROCESS CONTROL MONITORING LOCATIONS.
5. ONLY DETECTED COCs ARE PRESENTED ON THIS FIGURE.
6. < = COMPOUND WAS ANALYZED FOR BUT NOT DETECTED. THE ASSOCIATED VALUE IS THE COMPOUND QUANTITATION LIMIT.
7. J = THE COMPOUND WAS POSITIVELY IDENTIFIED; HOWEVER THE ASSOCIATED NUMERICAL VALUE IS AN ESTIMATED CONCENTRATION ONLY.
8. D = CONCENTRATION IS BASED ON DILUTED SAMPLE ANALYSIS.
9. E = IDENTIFIES COMPOUNDS WHOSE CONCENTRATIONS EXCEED THE CALIBRATION RANGE OF THE INSTRUMENTS.
10. R = THE SAMPLE RESULT WAS REJECTED.
11. B = THE COMPOUND HAS BEEN FOUND IN THE SAMPLE AS WELL AS IN ITS ASSOCIATED BLANK; ITS PRESENCE IN THE SAMPLE MAY BE SUSPECT.
12. N = THIS ANALYSIS INDICATES THE PRESENCE OF A COMPOUND FOR WHICH THERE IS PRESUMPTIVE EVIDENCE TO MAKE AN TENTATIVE IDENTIFICATION.
13. DETECTIONS EXCEEDING NYSDEC GROUNDWATER QUALITY STANDARDS ARE INDICATED BY SHADING.
14. *= MW-3S WAS RESAMPLED ON 11/8/01 DUE TO ANILINE DETECTION OURING 9/2001 SAMPLING EVENT AT A CONCENTRATION OF 690 PPB. ANILINE WAS DETECTED ON 11/8/01 AT A CONCENTRATION OF 69 PPB.
15. THE 10/02 SAMPLING EVENT N,N-DIMETHYLANILINE DATA FOR MW-1, MW-3S, MW-32, MW-35, AND TW-01 WERE REJECTED DUE TO MATRIX SPIKE AND MATRIX SPIKE DUPLICATE RECOVERIES BELOW CONTROL LIMITS. THESE MONITORING WELLS WERE NOT RESAMPLED.

0 100' 200'

GRAPHIC SCALE

McKESSON ENVIROSYSTEMS
FORMER BEAR STREET FACILITY
SYRACUSE, NEW YORK
BIANNUAL PROCESS CONTROL MONITORING REPORT

GROUNDWATER MONITORING DATA SUMMARY FOR 1988 - MAY 2003 AREAS 1 & 2

ARCADIS

FIGURE 1

MW-27									
Date	9/98	7/99	3/00	9/00	3/01	9/01	4/02	10/02	5/03
Acetone	23	<10 J	<10 J	<10 J	<10	<10	<18	9 J	<12
Benzene	3 J	4 J	6 J	4 J	5 J	5 J	7	3 J	8
Toluene	4 J	2 J	<10	<10	<10	<10	11	<10	11
Ethylbenzene	<10	3 J	8 J	3 J	5 J	2 J	12	<10	23
Xylene	3 J	8 J	2 J	1 J	2 J	<10	26	<20	51
Aniline	340 DJ	740 D	110 D	16 J	260 D	26	176,000 DJ	2,700 D	15,000 DJ
N,N-dimethylaniline	<10	<10	1 J	2 J	2 J	<10	19 J	100 J	11
Methylene Chloride	<10	<10	<10	1 J	<10	<10	<5	60 JN	43
Trichloroethene	<10	<10	<10	<10 J	<10	<10	<5	4 J	<5

PZ-5S										
Date	11/89	12/94	2/96	2/97	9/98	6/99	7/99	9/00	9/01	10/02
Acetone	<100	<10	<1,000	5 J	<10	<10 J	<10 J	<10 J	7 J	<25 J^

PZ-5D									
Date	11/89	12/94	2/96	2/97	9/98	7/99	9/00	9/01	10/02
Aniline	<10	<5	<5	<5	<5	<10	<10 J	<10	<5^

MW-19																	
Date	11/89	12/94	8/95	2/96	8/96	2/97	8/97	9/98	2/99	7/99	3/00	9/00	3/01	9/01	4/02	10/02	5/03
N,N-dimethylaniline	<10	<10	<10	<10	<10	<10	<10	5 J	<10	<10	<10	<10	<10	<10	<5	<5^	<5
Acetone	<100	<10	<1,000	<1,000	<10	<10	<10	<10	<10	<10 J	<10	<10 J	<10	<10	<10	<25 J	<12
Aniline	<10	<5	<5	<5	<5	<5	<5	<5	<10	<10	<5	<10 J	<10	<10	<5	<5	<5

PZ-4S														
Date	11/89	11/90	11/91	11/92	8/95	8/96	8/97	2/99	6/99	3/00	3/01	4/02	10/02	5/03
Aniline	<10	<10	<10	<10	<5	<5	<5	<10	<5	<5	<10	8 (<5)**	<5^	<5
N,N-dimethylaniline	<10	<10	<10	<10	<10	<10	<10	<10	<10 J	<10	3 J	<5 (<5)**	<5^	<5

PZ-4D														
Date	11/89	11/90	11/91	11/92	8/95	10/95	8/96	8/97	2/99	3/00	9/00	3/01	4/02	5/03
N,N-dimethylaniline	<10	<10	<10	<10	0.8 J	<10	<10	<12	<10	<10	<10	<10	<5	<5

MW-24DR										
Date	12/94	8/95	2/96	2/97	9/98	7/99	9/00	9/01	6/02	10/02
Aniline	<5	<5	<5	<5	<5	<10	<10 J	<10	ND**	<5^

MW-24SR											
Date	12/94	8/95	2/96	2/97	9/98	6/99	7/99	3/00	9/01	6/02	10/02
Aniline	<5	<5	<5	<5	<5	<10 J	<10	<10 J	<10	ND**	<5^

MW-17R															
Date	11/90	11/91	11/92	8/95	10/95	8/96	8/97	2/99	3/00	9/00	3/01	9/01	4/02	10/02	5/03
Acetone	<100	<100	<100	<1,000	NA	11	<10	<10	<10	<10 J	<10	<10	<10	<25 J	<12
Benzene	<1	<1	<1	<5	<5	<10	<10	1 J	8 J	15 J	8 J	5 J	6	14	8
Trichloroethene	<1	<1	<1	<5	2J	<10	<10	<10	<10	<10 J	<10	<10	<5	<10	<5
Methanol	<1,000	<1,000	<1,000	<1,000	NA	1,000	1,000	1,000	<1,000 J	<1,000 J	<1,000	<1,000	620 J	<1,000	<1,000
Aniline	<10	<10	<10	<5	NA	<5	<5	<10	<5	24 J	<10	<10	150 (<5)**	<5^	<5
N,N-dimethylaniline	<10	<10	<10	<10	NA	<10	<10	<10	<10	4 J	<10	<10	110 (<5)**	<5^	<5
Methylene Chloride	<1	<1	<1	<11	<5	<10	<10	<10 J	<10	1 J	<10	<10	<5	<10	<5

MW-30										
Date	9/98	2/99	7/99	3/00	9/00	3/01	9/01	4/02	10/02	5/03
Acetone	<10	7 J	<10	<10	<10 J	<10	4 J	<10	<25 J	<62
Benzene	<10	<10	0.7 J	<10	<10 J	<10	2 J	<5	<10	<25
Trichloroethene	<10	<10	0.5 J	<10	<10 J	<10	<10	<5	<10	<25
Aniline	<10	<10	<10	18	9 J	8 J	8 J	250	R	18
N,N-dimethylaniline	<10	2 J	1 J	2 J	2 J	2 J	1 J	210	R	0.6 J
Methylene Chloride	<10	<10	<10	4 J	2 J	<10	<10	<5	<10	8 J

MW-18																				
Date	11/89	11/90	11/91	11/92	12/94	8/95	2/96	8/96	2/97	8/97	9/98	2/99	7/99	3/00	9/00	3/01	9/01	4/02	10/02	5/03
Methanol	<1,000	<1,000	<1,000	<1,000	<200	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000 J	<1,000 J	<1,000	<1,000	720 J	<1,000	280 J
Aniline	<10	<10	<10	<10	<5	<5	<5	<5	<5	<5	<5	<10	<10	<5	<10 J	<10	<10	280 D (<5)**	<5^	<5
N,N-Dimethylaniline	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	200 D (<5)**	<5^	<5
Acetone	<100	<100	<100	<100	<10	<1,000	<1,000	<10	<10	<10	<10	<10	<10 J	<10	<10 J	<10	<10	<10	6 J	<12

MW-29										
Date	9/98	2/99	7/99	3/00	9/00	3/01	9/01	4/02	10/02	5/03
Acetone	<10	7 J	<10	<10	<10 J	<10	<10	<10	<25 J	<12
Xylene	2 J	1 J	<10	<10	<10 J	<10	<10	<10	<20	<10
Aniline	<10	5 J	2 J	450 D	24 J	30	7 J	3 J	8	19
N,N-dimethylaniline	13	4 J	4 J	6 J	4 J	4 J	2 J	9	R	1 J
Methylene Chloride	<10	<10	<10	<10	<10 J	<10	<10	<6	4 JN	<3

MW-23S																	
Date	12/94	8/95	2/96	8/96	2/97	8/97	9/98	2/99	6/99	7/99	3/00	9/00	3/01	9/01	4/02	10/02	5/03
Acetone	<10	<1,000	<1,000	<10	<10	12	<10	<10	<10 J	<10 J	<10	<10 J	<10	<10	<10	<25 J	<62
Aniline	<5	<5	<5	7	11	92	56	<10	<10 J	<10	<5	<10 J	<10	<10	<5	<5^	<5
N,N-dimethylaniline	<10	<10	<10	<10	<10	<10	7 J	10	2 J	<10	2 J	2 J	<10	<10	<5	<5^	<5
Methanol	<200	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000 J	<1,000	<1,000 J	<1000 J	<1,000	<1,000	<1,000	<1,000	380 J

MW-23I																
Date	12/94	8/95	2/96	8/96	2/97	8/97	9/98	2/99	7/99	3/00	9/00	3/01	9/01	4/02	10/02	5/03
Acetone	<10	<1,000	<1,000	<10	<10	<10	<10	<10	<10 J	<10	<10 J	<10	4 J	<10	<25 J	<12
Xylene	<5	<5	<10	<10	<10	<10	<10	<10	<10	<10	<10 J	<10	2 J	<10	<20 J	<5
Methylene Chloride	<5	<10	<10	<10	<10	<10	<10	<10 J	<10	<10	<10 J	<10	<10	2 J	<10	<5
Aniline	<5	<5	<5	<5	<5	<5	<5	<10	<10	<5	<10 J	<10	<10	<5	<5	<5

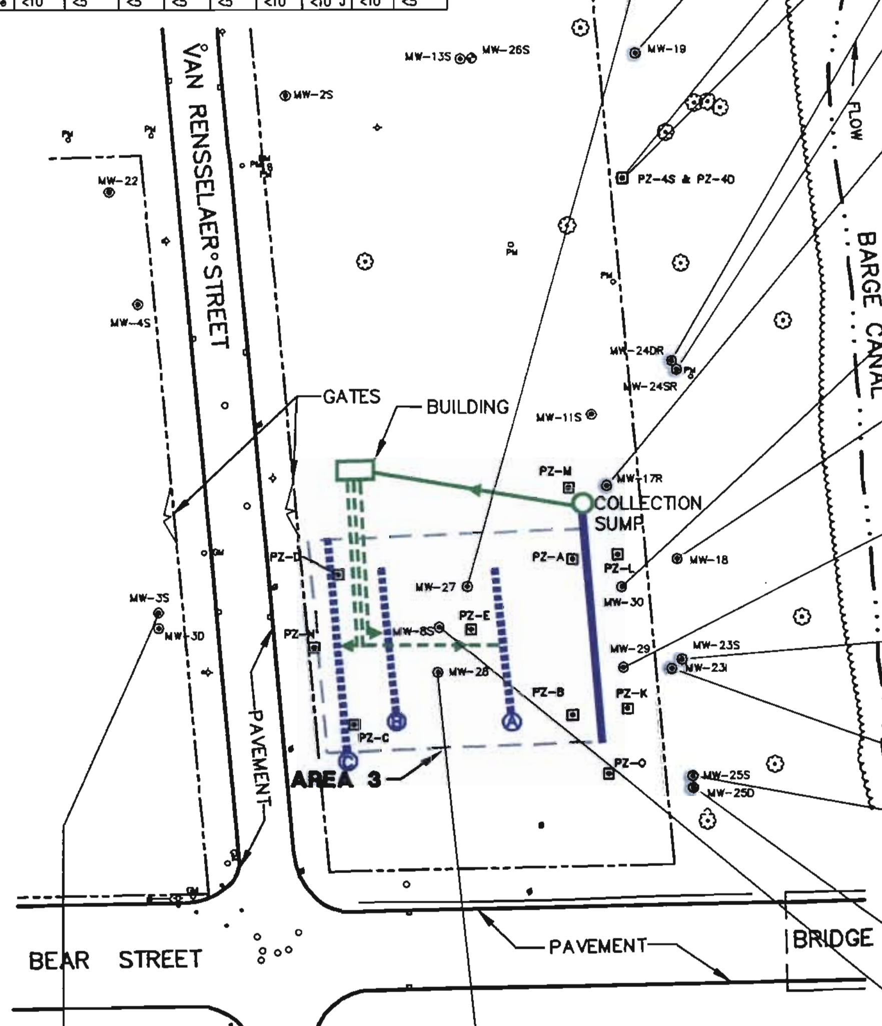
MW-25S														
Date	8/95	10/95	8/96	8/97	2/99	6/99	7/99	3/00	9/00	3/01	9/01	4/02	10/02	5/03
Aniline	<5	<5	<5	<5	130	110 J	5 J	<5	<10 J	<10	<10	<5	<5^	<5
N,N-dimethylaniline	0.7 J	<10	<10	<10	<10	21 J	<10	<10	<10	<10	<10	<5	<5^	<5

MW-25D										
Date	8/95	10/95	8/96	8/97	2/99	3/00	9/00	3/01	4/02	5/03
Acetone	<1,000	NA	15	<10	<10	<10	<10	<10	<10	<12
Trichloroethene	<5	3 J	<10	<10	<10	<10	<10	<10	<5	<5
N,N-dimethylaniline	1 J	<10	<10	<11	<10	<10	<10	<10	<5	<5
Aniline	<5	<5	<5	<5	<5	<10	<5	5 J	<5	<5

MW-8S														
Date	1/89	11/89	11/91	8/95	9/98	2/99	7/99	3/00	9/00	3/01	9/01	4/02	10/02	5/03
Acetone	<1,000,000	470,000	<1,000,000	<1,000	<10,000 J	<20,000	10 J	<100,000	<50,000 J	<50,000	<400	2,100	120 J	<12
Benzene	<10,000	<10,000	<10,000	<250,000 D	<10,000	<20,000	22 J	<100,000	<50,000 J	<50,000	<400	50 J	23	20 J
Toluene	<10,000	<10,000	<10,000	<250,000 D	<10,000	<20,000	240 J	<100,000	<50,000 J	<50,000	430	410	310	600 D
Ethylbenzene	<10,000	<10,000	<10,000	<250,000 D	<10,000	<20,000	58 J	<100,000	<50,000 J	<50,000	170 J	100 J	73	81
Xylene	<10,000	<10,000	<30,000	<250,000 D	<10,000	<20,000	220 J	<100,000	<50,000 J	<50,000	680	400	287	300
Methanol	430,000	300,000	150,000	22,000	7,900	16,000 JN	17,000	30,000 J	14,000 J	53,000	6,900 J	<1,000	<1,000	<1,000
Trichloroethene	<10,000	<10,000	<10,000	60,000 JD	3,300 J	11,000 J	11,000 J	<100,000	9,200 J	11,000 J	18,000 JD	9,600 J	3,100	6,700 D
Aniline	2,900	8,500	8,000	<25,000 D	1,200 J	30,000 D	24,000	82,000	42,000 J	90,000 D	21,000	793,000 D	80,000	79,000 D
N,N-dimethylaniline	24,000	52,000	33,000	380,000 D	26,000 D	120,000 D	77,000	270,000 D	59,000	120,000 D	29,000	773,000 D	21,000 J	28 J
Methylene Chloride	3,200,000	2,800,000	1,600,000	7,700,000 D	140,000	650,000 DB	450,000 D	1,300,000	540,000 BJ	990,000	440,000 BD	660,000 D	320,000	910,000 D

MW-28									
Date	9/98	7/99	3/00	9/00	3/01	9/01	4/02	10/02	5/03
Benzene	<5,000	<500	<10,000	<1,000 J	<400	<400	8	8 J	4 J
Toluene	<5,000	<500	<10,000	<1,000 J	<400	<400	6	8 J	2 J
Ethylbenzene	<5,000	<500	<10,000	<1,000 J	<400	<400	9	11	2 J
Xylene	<5,000	<500	<10,000	<1,000 J	<400	<400	10 J	12 J	8 J
Methanol	2,200	<1,000	<1,000 J	<1,000 J	<1,000	<1,000 J	<1,000	<1,000	<1,000
Aniline	546 D	1,100 D	1,300 D	540 DJ	3,200 D	1,000 D	33,400 D	2,700 D	1,000 DJ
N,N-dimethylaniline	54	40	30	<10	7 J	<10	57	R	3 J
Methylene Chloride	84,000 J	39,000 D	130,000 J	8,100 BJ	5,900 B	4,700 B	4,600 D	<10	52
Acetone	<5,000 J	<500 J	<10,000	<1,000 J	<400	<400	<49	14 J	13

MW-3S														
Date	3/88	1/89	11/89	11/91	8/95	9/98	7/99	3/00	9/00	3/01	9/01	4/02	10/02	5/03
Acetone	<100	<10,000	<10,000	2,900	<1,000	<10	<10	<10 J	<10 J	<10	<10	<12	<25	<12
Benzene	<1	<100	<100	10	<5	<10	1 J	<10	1 J	<10	3 J	<5	<10	<5
Toluene	<1	120	<100	10	<5	<10	0.7 J	<10	2 J	<10	8 J	<5	<10	<5
Ethylbenzene	<1	<100	<100	4	<5	<10	<10	<10	<10 J	<10	1 J	<5	<10	<5
Xylene	<1	<100	<100	31	<5	<10	<10	<10	<10 J	<10	2 J	<10	<20	<10
Methanol	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000 J	<1,000	<1,000	<1,000 J	370 J	<1,000	<1,000
Trichloroethene	50	1,100	100	<10	<5	<10	<10	<10	<10 J	<10	<10	<5	<10	<5
Aniline	<10	<11	<52	790	15	<10	9 J	<10	2 J	<10	690 D (69*)	1.7 J	<5	<5
N,N-dimethylaniline	<10	5,570	440	170	2 J	<10	<10	<10	1 J	<10	4 J	<5	R	<5
Methylene Chloride	110	4,700	2,700	<10	<10	<10	<10	<10	<10 J	<10	<10	<5	<10	<5



LEGEND:

- UTILITY POLE
- CATCH BASIN
- PM PETROLEUM PIPE LINE MARKER
- GM GAS LINE MARKER
- HYDRANT
- WATER VALVE
- MANHOLE
- PROPERTY LINE
- EDGE OF WATER
- EDGE OF TREELINE
- TREE
- MW-19 GROUNDWATER MONITORING WELL
- PZ-A PIEZOMETER
- OR BIANNUAL DOWNGRADIENT PERIMETER GROUNDWATER MONITORING LOCATION
- MW-26S PUMPING WELL
- APPROXIMATE BOUNDARY OF AREA
- GROUNDWATER WITHDRAWAL TRENCH
- (A) GROUNDWATER INFILTRATION TRENCH
- PIPING TO BUILDING
- PIPING FROM BUILDING

SAMPLE IDENTIFICATION

MW-25		
Date	8/95	10/95
Acetone	<1,000	NA
Trichloroethene	<5	3 J
N,N-dimethylaniline	1 J	<10
Aniline	<5	<5

CONCENTRATION (ppb)

NOTES:

1. REPLACED MONITORING WELLS ARE IDENTIFIED WITH AN "R" (e.g., MW-24DR).
2. TRENCH LOCATIONS ARE APPROXIMATE.
3. MONITORING LOCATIONS ARE APPROXIMATE.
4. FIGURE ONLY SHOWS COC CONCENTRATIONS AT MONITORING LOCATIONS WITHIN THE IMPACTED AREAS AND THE CHEMICAL PROCESS CONTROL MONITORING LOCATIONS.
5. ONLY DETECTED COCs ARE PRESENTED ON THIS FIGURE.
6. < = COMPOUND WAS ANALYZED FOR BUT NOT DETECTED. THE ASSOCIATED VALUE IS THE COMPOUND QUANTITATION LIMIT.
7. J = THE COMPOUND WAS POSITIVELY IDENTIFIED; HOWEVER THE ASSOCIATED NUMERICAL VALUE IS AN ESTIMATED CONCENTRATION ONLY.
8. D = CONCENTRATION IS BASED ON DILUTED SAMPLE ANALYSIS.
9. E = IDENTIFIES COMPOUNDS WHOSE CONCENTRATIONS EXCEED THE CALIBRATION RANGE OF THE INSTRUMENTS.
10. B = THE COMPOUND HAS BEEN FOUND IN THE SAMPLE AS WELL AS IN ITS ASSOCIATED BLANK; ITS PRESENCE IN THE SAMPLE MAY BE SUSPECT.
11. N = THIS ANALYSIS INDICATES THE PRESENCE OF A COMPOUND FOR WHICH THERE IS PRESUMPTIVE EVIDENCE TO MAKE AN TENTATIVE IDENTIFICATION.
12. R = THE SAMPLE RESULT WAS REJECTED.
13. DETECTIONS EXCEEDING NYSDEC GROUNDWATER QUALITY STANDARDS ARE INDICATED BY SHADING.
14. THE ANILINE DATA FOR THE 9/98 SAMPLING EVENT FOR MW-18, MW-19, MW-23S, MW-23I, MW-24SR, MW-24DR, MW-28, PZ-5S AND PZ-5D WERE OBTAINED IN 12/98, BECAUSE THE 9/98 RESULTS WERE REJECTED DUE TO LABORATORY ERROR.
15. * = MW-3S WAS RESAMPLED ON 11/8/01 DUE TO ANILINE DETECTION DURING 9/2001 SAMPLING EVENT AT A CONCENTRATION OF 690 PPB. ANILINE WAS DETECTED ON 11/8/01 AT A CONCENTRATION OF 69 PPB.
16. ** = MONITORING WELLS MW-17R, MW-18, AND PZ-4S WERE RESAMPLED FOR ANILINE AND N,N-DIMETHYLANILINE ON JUNE 18, 2002 DUE TO N,N-DIMETHYLANILINE AND/ OR ANILINE DETECTION AT THESE PERIMETER MONITORING LOCATIONS DURING THE APRIL 2002 SAMPLING EVENT. THE RESULTS OF THIS RESAMPLING EVENT ARE SHOWN IN PARENTHESIS. MONITORING WELLS MW-24SR AND MW-24DR WERE ALSO SAMPLED ON JUNE 18, 2002 FOR ANALYSIS OF ANILINE AND N,N-DIMETHYLANILINE. THESE COMPOUNDS WERE NOT DETECTED.
17. ^ = THE ANILINE AND N,N-DIMETHYLANILINE DATA FOR THE 10/02 SAMPLING EVENT FOR MW-17R, MW-18, MW-19, MW-23S, MW-23I, MW-24SR, MW-24DR, MW-25S, PZ-4S, PZ-5S, AND PZ-5D WERE OBTAINED IN 1/03, BECAUSE THE 10/02 RESULTS WERE REJECTED DUE TO MATRIX SPIKE AND MATRIX SPIKE DUPLICATE RECOVERIES BELOW CONTROL LIMITS.
18. THE 10/02 SAMPLING EVENT N,N-DIMETHYLANILINE DATA FOR MW-3S, MW-28 AND MW-29 AND THE 10/02 SAMPLING EVENT ANILINE AND N,N-DIMETHYLANILINE DATA FOR MW-30 WERE REJECTED DUE TO MATRIX SPIKE AND MATRIX SPIKE DUPLICATE RECOVERIES BELOW CONTROL LIMITS. THESE MONITORING WELLS WERE NOT RESAMPLED.

0 120' 240'

GRAPHIC SCALE

McKESSON ENVIROSYSTEMS
FORMER BEAR STREET FACILITY
SYRACUSE, NEW YORK
BIANNUAL PROCESS CONTROL MONITORING REPORT

GROUNDWATER MONITORING DATA SUMMARY FOR 1988 - MAY 2003 AREA 3

ARCADIS

FIGURE 2

CITY: SYRACUSE DIV/GROUP: ENVCAD DB: N.SMITH/GALL L.FORAKER LD: PIC: D.ULM PM: D.PENNIMAN TM: D.PENNIMAN LYR: ON=*;OFF=*REF* G:\ENVCAD\SYRACUSE\ACT\B0026003\0000\01900\DWG\MARCH09\26003C01.DWG LAYOUT: 2 SAVED: 8/25/2009 1:19 PM ACADVER: 17.0S (LMS TECH) PAGESETUP: C-LB-PDF-CONV PLOTSTYLETABLE: PLTFULL.CTB PLOTTED: 9/8/2009 12:24 PM BY: STOWELL, GARY

XREFS: 26003X01 26003X00 IMAGES: PROJECTNAME: ---

TW-02R

Date	10/03	6/04
Acetone	68	140 J
Benzene	28	19 J
Toluene	75 J	39 J
Ethylbenzene	<5	31 J
Xylene	<10	111 J
Methanol	<1,000	<1,000
Trichloroethene	2 J	<10 J
Aniline	92,000 D	82,000
N,N-dimethylaniline	<260	<5,200
Methylene Chloride	91	4 J

TW-02RR

Date	11/04	6/05	11/05	6/06
Acetone	18 J	7.2 J	26 J	16
Benzene	4 J	3.6	6	4.4
Toluene	8 J	2.1 J	4.1	1.3 J
Ethylbenzene	4 J	3.6 J	3.6	2.7 J
Xylene	16 J	9.6	11	6.7
Methanol	<1,000	<1,000	<1,000	<1,000
Trichloroethene	<10	0.3 J	<0.4	<1.0
Aniline	7,100 D	8,400	14,000	10,000
N,N-dimethylaniline	<5.0	<50	<110 J	<100
Methylene Chloride	<10	<3.0	<0.5	<3.0

MW-35

Date	10/03	6/04	11/04	6/05	11/05	6/06
Acetone	5 J	<25	<25	<5.0 J	<5.0 J	<5.0
Benzene	<5.0	<10	<10	<1.0	<1.0	<1.0
Toluene	<5.0	<10	<10	<5.0	<5.0	<5.0
Ethylbenzene	<5.0	<10	<10	<4.0	<4.0	<4.0
Xylene	<10	<20	<20	<5.0	<5.0	<5.0
Methanol	<1000	<1000	240 J	<1,000	<1,000	<1,000
Trichloroethene	<5.0	<10	<10	<1.0	<1.0	<1.0
Aniline	4 J	30	82	<1.0	<1.0	0.4 J
N,N-dimethylaniline	<5.0	4 J	<5.0	<1.0	<1.0 J	<1.0
Methylene Chloride	<5.0	<10	<10	<3.0	<3.0	<3.0

MW-36

Date	10/03	6/04	11/04	6/05	11/05	6/06
Acetone	580 D	22 J	13 J	24 J	77 J	25
Benzene	<5.0	<10 J	<10	2.1	3.6	1.6
Toluene	<5.0	<10 J	<10	<5.0	2.0 J	0.7 J
Ethylbenzene	<5.0	<10 J	<10	<4.0	0.6 J	<4.0
Xylene	<10	<20 J	<20	1.0 J	2.8 J	1.2 J
Methanol	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000
Trichloroethene	<5.0	<10 J	<10	<1.0	<1.0	<1.0
Aniline	100	33	22	1,200	1,600	76
N,N-dimethylaniline	<5.0	7	<5.0	<5.4	<10 J	1.9
Methylene Chloride	<5.0	<10 J	<10	<3.0	<3.0	<3.0

MW-34

Date	10/03	6/04	11/04	6/05	11/05	6/06
Acetone	9 J	24 J	<25	5.6 J	20 J	6.4
Benzene	<5.0	<10	<10	0.7 J	<0.3	0.6 J
Toluene	<5.0	<10	<10	0.9 J	0.9	0.5 J
Ethylbenzene	<5	<10	<10	<4.0	<0.5	<4.0
Xylene	<10	<20	<20	1.2 J	1.1	<5.0
Methanol	<1000	<1000	180 J	<1,000	<1,000	<1,000
Trichloroethene	<5.0	<10	<10	0.4 J	<0.4	<1.0
Aniline	18	30	14	16	12	16
N,N-dimethylaniline	<5.0	<5.0	<5.0	2.5	2 J	2.3
Methylene Chloride	<5.0	<10	<10	<3.0	<0.5	<3.0

TW-01

Date	10/03	6/04	11/04	6/05	11/05	6/06
Acetone	<12	6 J	<25	<5.0 J	<1.3 J	<5.0 J
Benzene	8	3 J	2 J	1.8	1.9	1 J
Toluene	<5.0	<10	<10	<5.0	<0.4	<5.0 J
Ethylbenzene	<5.0	<10	<10	<4.0	<0.5	<4.0 J
Xylene	<10	<20	<20	<5.0	<0.4	<5.0 J
Methanol	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000 J
Trichloroethene	<5.0	<10	<10	<1.0	<0.4	<1.0 J
Aniline	0.6 J	<5.0	<5.0	<1.0	<1.0	<1.0 J
N,N-dimethylaniline	<5.0	<5.0	<5.0	<1.0	<1.0 J	0.8 J
Methylene Chloride	<5.0	<10	<10	<3.0	<0.5	<3.0 J

MW-31

Date	10/03	6/04	11/04	6/05	11/05	6/06
Acetone	1,200 D	15 J	<25	<5.0 J	<1.3 J	<5.0 J
Benzene	13	12	9 J	11	6.7	11 J
Toluene	<5.0	<10	<10	<5.0	<0.4	0.6 J
Ethylbenzene	<5.0	<10	<10	<4.0	<0.5	<4.0 J
Xylene	<5.0	<20	<20	1.3 J	0.6	1.7 J
Methanol	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000 J
Trichloroethene	<5.0	<10	<10	<1.0	<0.4	<1.0 J
Aniline	88	3 J	<5.0	3.2	16	<1.0 J
N,N-dimethylaniline	<5.0	<5.0	<5.0	2.7	<1.0 J	2.4 J
Methylene Chloride	<5.0	<10	<10	<3.0	<0.5	3.4

MW-9S

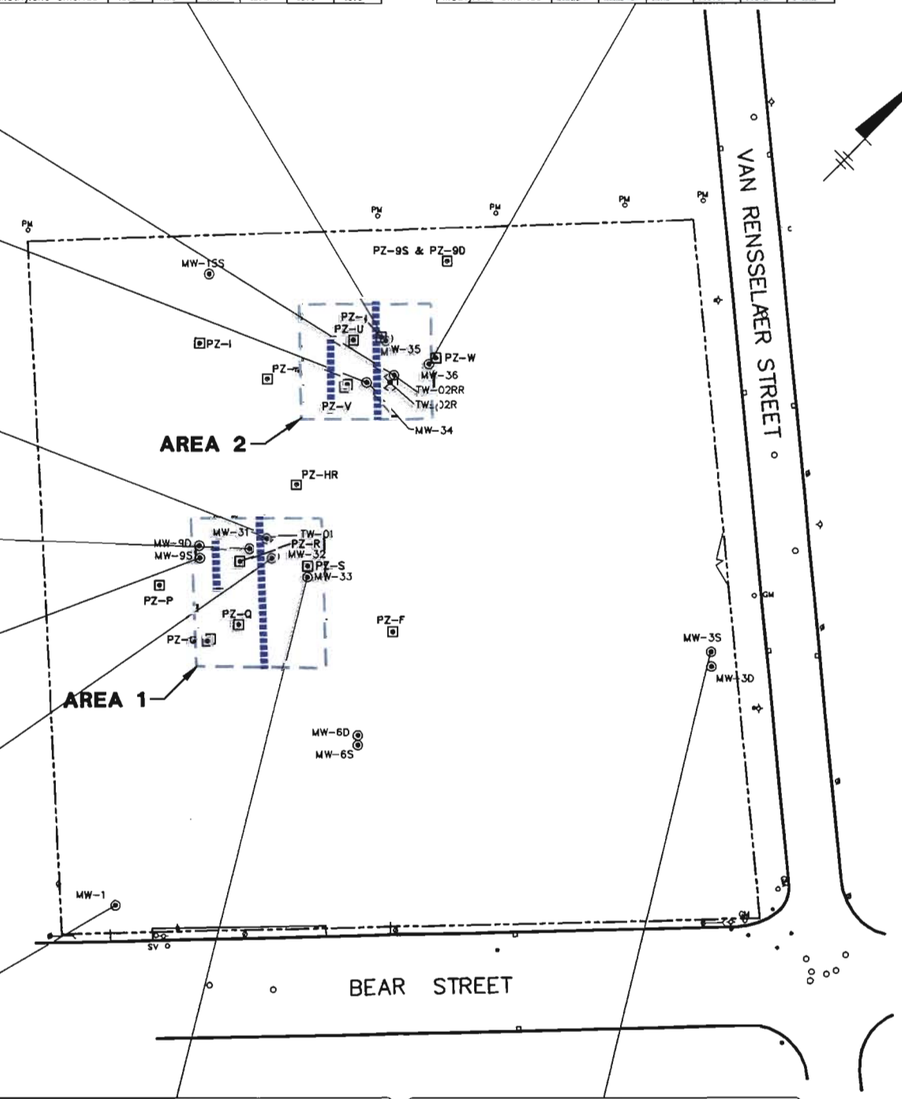
Date	10/03	6/04	11/04	6/05	11/05	6/06
Acetone	<12	14 J	<25	44 J	<1.3 J	<5.0 J
Benzene	2 J	6 J	4 J	19	3.5	1.1 J
Toluene	<5	2 J	2 J	3.2 J	3.8	2.3 J
Ethylbenzene	5	8 J	9 J	24	11	25 J
Xylene	19	19 J	30 J	64	33	60 J
Methanol	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000 J
Trichloroethene	<5.0	<10	<10	<1.0	<0.4	<1.0 J
Aniline	1 J	<5.0	<5.0	2.6	1.4	<1.1 J
N,N-dimethylaniline	<5.0	<5.0	<5.0	1.9	6.1 J	3.3 J
Methylene Chloride	<5.0	<10	<10	<3.0	<0.5	<3.0 J

MW-32

Date	10/03	6/04	11/04	6/05	11/05	6/06
Acetone	20	6 J	<25	<5.0 J	<5.0 J	<5.0 J
Benzene	2 J	1 J	<10	1	<1.0	<1.0 J
Toluene	<5.0	<10	<10	<5.0	<5.0	<5.0 J
Ethylbenzene	<5.0	<10	<10	<4.0	<4.0	<4.0 J
Xylene	<10	<20	<20	<5.0	<5.0	<5.0 J
Methanol	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000 J
Trichloroethene	<5.0	<10	<10	<1.0	<1.0	<1.0 J
Aniline	<5.0	1 J	<5.0	0.4 J	<1.0	<1.0 J
N,N-dimethylaniline	<5.0	<5.0	<5.0	<1.0	<1.0 J	<1.0 J
Methylene Chloride	<5.0	<10	<10	<3.0	<3.0	<3.0 J

MW-1

Date	10/03	6/04	11/04	6/05	11/05	6/06
Acetone	<12	<25	-	<5.0 J	<1.3 J	<5.0 J
Benzene	<5.0	<10	-	<1.0	<0.3	<1.0 J
Toluene	<5.0	<10	-	<5.0	<0.4	<5.0 J
Ethylbenzene	<5.0	<10	-	<4.0	<0.5	<4.0 J
Xylene	<10	<20	-	<5.0	<0.4	<5.0 J
Methanol	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000 J
Trichloroethene	<5.0	<10	-	<1.0	<0.4	<1.0 J
Aniline	2 J	<5.0	<5.0	0.2 J	<1.0	<1.0 J
N,N-Dimethylaniline	<5.0	<5.0	<5.0	<1.0	<1.0 J	<1.0 J
Methylene Chloride	<5.0	<10	-	<3.0	<0.5	<3.0 J



MW-33

Date	10/03	6/04	11/04	6/05	11/05	6/06
Acetone	22	9 J	-	<5.0 J	<5.0 J	<5.0 J
Benzene	2 J	12 J	-	17	18	6.7 J
Toluene	<5.0	<10 J	-	1.0 J	1.8 J	0.7 J
Ethylbenzene	<5.0	<10 J	-	<4.0	<4.0	<4.0 J
Xylene	<10	<20 J	-	<5.0	<5.0	<5.0 J
Methanol	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000 J
Trichloroethene	<5.0	<10 J	-	<1.0	<1.0	<1.0 J
Aniline	1,800 D	2,700 D	2,700 D	1,800	3,500	370 J
N,N-dimethylaniline	<6.0	5 J	5 J	<10	<25 J	3.5 J
Methylene Chloride	<5.0	<10 J	-	<3.0	<3.0	<3.0 J

MW-3S

Date	10/03	6/04	11/04	6/05	11/05	6/06
Acetone	<12	6 J	<25	<5.0 J	<1.3 J	<5.0
Benzene	<5.0	<10	<10	<1.0	<0.3	<1.0
Toluene	<5.0	<10	<10	<5.0	<0.4	<5.0
Ethylbenzene	<5.0	<10	<10	<4.0	<0.5	<4.0
Xylene	<10	<20	<20	<5.0	<0.4	<5.0
Methanol	<1,000	<1,000	150 J	<1,000	<1,000	<1,000
Trichloroethene	<5.0	<10	<10	<1.0	<0.4	<1.0
Aniline	4 J	0.8 J	4 J	15	<1.0	<1.0
N,N-dimethylaniline	<5.0	<6.0	<5.0	<1.0	<1.0 J	<1.0
Methylene Chloride	<5.0	<10	<10	<3.0	<0.5	<3.0

LEGEND:

- UTILITY POLE
- CATCH BASIN
- PETROLEUM PIPE LINE MARKER
- GAS LINE MARKER
- SEWER VENT
- HYDRANT
- WATER VALVE
- MANHOLE
- PROPERTY LINE
- MW-19 GROUNDWATER MONITORING WELL
- PZ-A PIEZOMETER
- TW-02R REMOVED GROUNDWATER MONITORING WELL
- APPROXIMATE BOUNDARY OF AREA
- GROUNDWATER INFILTRATION TRENCH

MW-35

Date	10/03	6/04	11/04	6/05	11/05	6/06
Acetone	5 J	<25	<25	<5.0 J	<5.0 J	<5.0
Benzene	<5.0	<10	<10	<1.0	<1.0	<1.0
Toluene	<5.0	<10	<10	<5.0	<5.0	<5.0
Ethylbenzene	<5.0	<10	<10	<4.0	<4.0	<4.0
Xylene	<10	<20	<20	<5.0	<5.0	<5.0
Methanol	<1000	<1000	240 J	<1,000	<1,000	<1,000
Trichloroethene	<5.0	<10	<10	<1.0	<1.0	<1.0
Aniline	4 J	30	82	<1.0	<1.0	0.4 J
N,N-dimethylaniline	<5.0	4 J	<5.0	<1.0	<1.0 J	<1.0
Methylene Chloride	<5.0	<10	<10	<3.0	<3.0	<3.0

SAMPLE IDENTIFICATION

CONCENTRATION (ppb)

DETECTIONS EXCEEDING NYSDEC GROUNDWATER QUALITY STANDARDS ARE INDICATED BY SHADING.

NOTES:

1. REPLACED MONITORING WELLS ARE IDENTIFIED WITH AN "R" (e.g., MW-24DR).
2. TRENCH LOCATIONS ARE APPROXIMATE.
3. MONITORING LOCATIONS ARE APPROXIMATE.
4. FIGURE ONLY SHOWS COC CONCENTRATIONS AT MONITORING LOCATIONS WITHIN THE IMPACTED AREAS AND THE CHEMICAL PROCESS CONTROL MONITORING LOCATIONS.
5. ONLY COC CONCENTRATIONS DETECTED OR THAT HAVE BEEN DETECTED ARE PRESENTED ON THIS FIGURE (SEE ATTACHMENT A FIGURE 1).
6. < = COMPOUND WAS ANALYZED FOR BUT NOT DETECTED. THE ASSOCIATED VALUE IS THE COMPOUND QUANTITATION LIMIT.
7. J = THE COMPOUND WAS POSITIVELY IDENTIFIED; HOWEVER THE ASSOCIATED NUMERICAL VALUE IS AN ESTIMATED CONCENTRATION ONLY.
8. D = CONCENTRATION IS BASED ON DILUTED SAMPLE ANALYSIS.
9. R = THE SAMPLE RESULT WAS REJECTED.
10. DURING THE AUGUST 2004 SUPPLEMENTAL REMEDIAL ACTIVITIES, MONITORING WELL TW-02R WAS REMOVED AND TW-02RR WAS CONSTRUCTED OUTSIDE THE SOIL REMOVAL AREA IN THE VICINITY OF TW-02R.
11. THE 11/04 SAMPLING EVENT VOLATILE ORGANIC COMPOUND (VOC) DATA FOR MW-33 AND MW-1 WERE INADVERTENTLY LOST DUE TO LABORATORY EQUIPMENT FAILURE. AS DETAILED IN THE BIANNUAL REPORT, THESE MONITORING WELLS WERE NOT RESAMPLED.

0 100' 200'

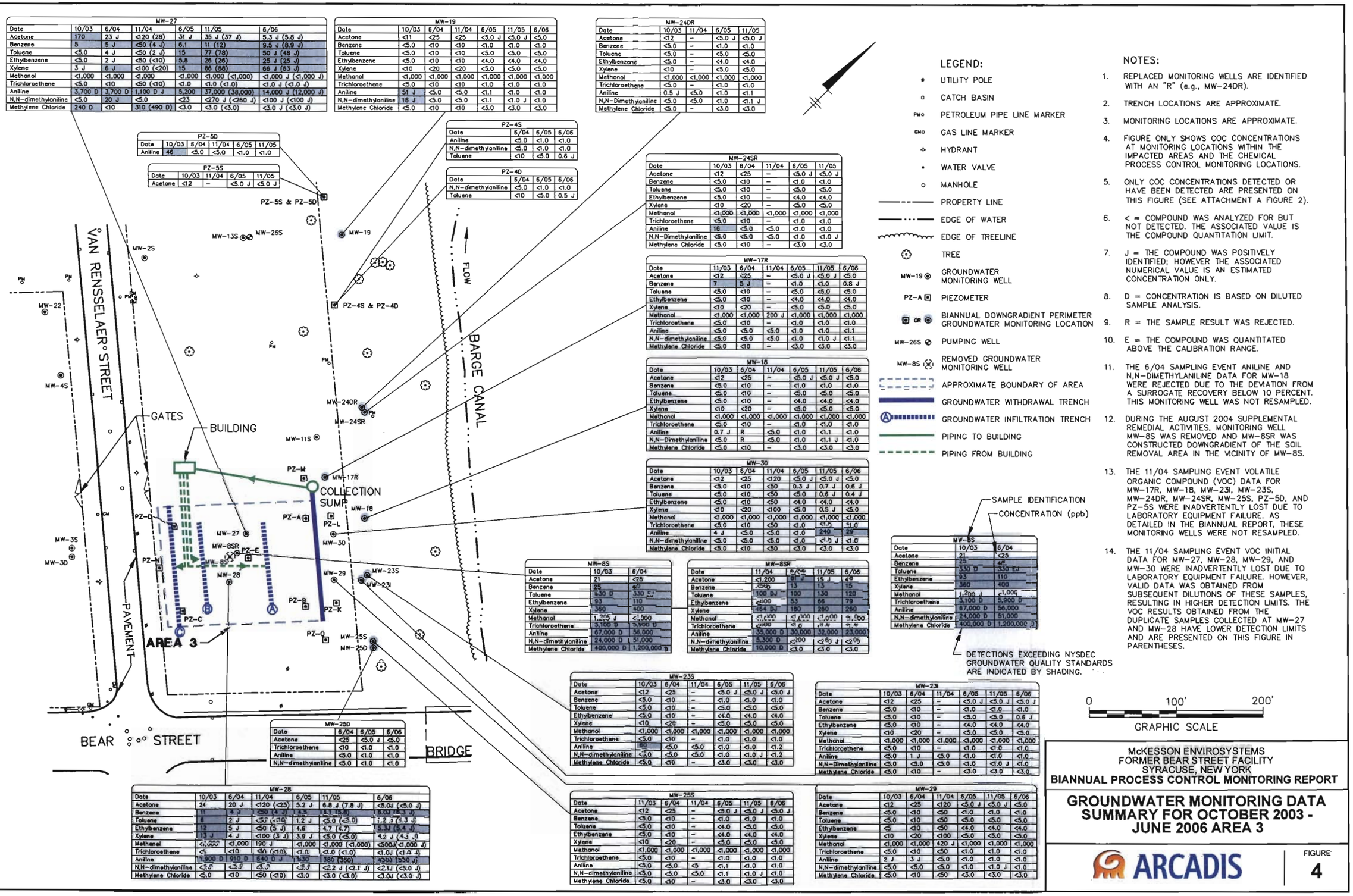
GRAPHIC SCALE

McKESSON ENVIROSYSTEMS
FORMER BEAR STREET FACILITY
SYRACUSE, NEW YORK
BIANNUAL PROCESS CONTROL MONITORING REPORT

GROUNDWATER MONITORING DATA SUMMARY FOR OCTOBER 2003 - JUNE 2006 AREAS 1 & 2

ARCADIS

FIGURE 3



MW-27

Date	10/03	6/04	11/04	6/05	11/05	6/06
Acetone	170	23 J	<120 (28)	31 J	35 J (37 J)	5.3 J (5.8 J)
Benzene	5	5 J	<50 (4 J)	6.1	11 (12)	9.5 J (8.9 J)
Toluene	<5.0	4 J	<50 (2 J)	15	77 (78)	50 J (48 J)
Ethylbenzene	<5.0	2 J	<50 (<10)	5.8	26 (26)	25 J (25 J)
Xylene	3 J	6 J	<100 (<20)	15	86 (88)	66 J (63 J)
Methanol	<1,000	<1,000	<1,000	<1,000	<1,000 (<1,000)	<1,000 J (<1,000 J)
Trichloroethene	<5.0	<10	<50 (<10)	<1.0	<1.0 (<1.0)	<1.0 J (<1.0 J)
Aniline	3,700 D	3,700 D	1,100 D J	5,200	37,000 (38,000)	14,000 J (12,000 J)
N,N-dimethylaniline	<5.0	20 J	<5.0	<23	<270 J (<260 J)	<100 J (<100 J)
Methylene Chloride	240 D	<10	310 (490 D)	<3.0	<3.0 (<3.0)	<3.0 J (<3.0 J)

MW-19

Date	10/03	6/04	11/04	6/05	11/05	6/06
Acetone	<11	<25	<25	<5.0 J	<5.0 J	<5.0
Benzene	<5.0	<10	<10	<1.0	<1.0	<1.0
Toluene	<5.0	<10	<10	<5.0	<5.0	<5.0
Ethylbenzene	<5.0	<10	<10	<4.0	<4.0	<4.0
Xylene	<10	<20	<20	<5.0	<5.0	<5.0
Methanol	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000
Trichloroethene	<5.0	<10	<10	<1.0	<1.0	<1.0
Aniline	51 J	<5.0	<5.0	<1.1	<1.0	<1.0
N,N-dimethylaniline	16 J	<5.0	<5.0	<1.1	<1.0 J	<1.0
Methylene Chloride	<5.0	<10	<10	<3.0	<3.0	<3.0

MW-24DR

Date	10/03	11/04	6/05	11/05
Acetone	<12	–	<5.0 J	<5.0 J
Benzene	<5.0	–	<1.0	<1.0
Toluene	<5.0	–	<5.0	<5.0
Ethylbenzene	<5.0	–	<4.0	<4.0
Xylene	<10	–	<5.0	<5.0
Methanol	<1,000	<1,000	<1,000	<1,000
Trichloroethene	<5.0	–	<1.0	<1.0
Aniline	0.5 J	<5.0	<1.0	<1.1
N,N-Dimethylaniline	<5.0	<5.0	<1.0	<1.1 J
Methylene Chloride	<5.0	–	<3.0	<3.0

PZ-5D

Date	10/03	6/04	11/04	6/05	11/05
Aniline	46	<5.0	<5.0	<1.0	<1.0

PZ-5S

Date	10/03	11/04	6/05	11/05
Acetone	<12	–	<5.0 J	<5.0 J

PZ-4S

Date	6/04	6/05	6/06
Aniline	<5.0	<1.0	<1.0
N,N-dimethylaniline	<5.0	<1.0	<1.0
Toluene	<10	<5.0	0.6 J

PZ-4D

Date	6/04	6/05	6/06
N,N-dimethylaniline	<5.0	<1.0	<1.0
Toluene	<10	<5.0	0.5 J

MW-24SR

Date	10/03	6/04	11/04	6/05	11/05
Acetone	<12	<25	–	<5.0 J	<5.0 J
Benzene	<5.0	<10	–	<1.0	<1.0
Toluene	<5.0	<10	–	<5.0	<5.0
Ethylbenzene	<5.0	<10	–	<4.0	<4.0
Xylene	<10	<20	–	<5.0	<5.0
Methanol	<1,000	<1,000	<1,000	<1,000	<1,000
Trichloroethene	<5.0	<10	–	<1.0	<1.0
Aniline	16	<5.0	<5.0	<1.0	<1.0
N,N-Dimethylaniline	<8.0	<5.0	<5.0	<1.0	<1.0 J
Methylene Chloride	<5.0	<10	–	<3.0	<3.0

MW-17R

Date	11/03	6/04	11/04	6/05	11/05	6/06
Acetone	<12	<25	–	<5.0 J	<5.0 J	<5.0
Benzene	7	5 J	–	<1.0	<1.0	0.8 J
Toluene	<5.0	<10	–	<5.0	<5.0	<5.0
Ethylbenzene	<5.0	<10	–	<4.0	<4.0	<4.0
Xylene	<10	<20	–	<5.0	<5.0	<5.0
Methanol	<1,000	<1,000	200 J	<1,000	<1,000	<1,000
Trichloroethene	<5.0	<10	–	<1.0	<1.0	<1.0
Aniline	<5.0	<5.0	<5.0	<1.0	<1.0	<1.1
N,N-dimethylaniline	<5.0	<5.0	<5.0	<1.0	<1.0 J	<1.1
Methylene Chloride	<5.0	<10	–	<3.0	<3.0	<3.0

MW-18

Date	10/03	6/04	11/04	6/05	11/05	6/06
Acetone	<12	<25	–	<5.0 J	<5.0 J	<5.0
Benzene	<5.0	<10	–	<1.0	<1.0	<1.0
Toluene	<5.0	<10	–	<5.0	<5.0	<5.0
Ethylbenzene	<5.0	<10	–	<4.0	<4.0	<4.0
Xylene	<10	<20	–	<5.0	<5.0	<5.0
Methanol	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000
Trichloroethene	<5.0	<10	–	<1.0	<1.0	<1.0
Aniline	0.7 J	R	<5.0	<1.0	<1.1	<1.0
N,N-Dimethylaniline	<5.0	R	<5.0	<1.0	<1.1 J	<1.0
Methylene Chloride	<5.0	<10	–	<3.0	<3.0	<3.0

MW-30

Date	10/03	6/04	11/04	6/05	11/05	6/06
Acetone	<12	<25	<120	<5.0 J	<5.0 J	<5.0
Benzene	<5.0	<10	<50	0.3 J	0.7 J	0.6 J
Toluene	<5.0	<10	<50	<5.0	0.6 J	0.4 J
Ethylbenzene	<5.0	<10	<50	<4.0	<4.0	<4.0
Xylene	<10	<20	<100	<5.0	0.5 J	<5.0
Methanol	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000
Trichloroethene	<5.0	<10	<50	<1.0	<1.0	<1.0
Aniline	4 J	<5.0	<5.0	<1.0	240	22
N,N-dimethylaniline	<5.0	<5.0	<5.0	<1.0	<1.0 J	<1.0
Methylene Chloride	<5.0	<10	<50	<3.0	<3.0	<3.0

MW-8S

Date	10/03	6/04
Acetone	21	<25
Benzene	25	49
Toluene	330 D	330 DJ
Ethylbenzene	93	110
Xylene	360	400
Methanol	1,200 J	<1,000
Trichloroethene	3,100 D	5,900 D
Aniline	67,000 D	56,000
N,N-dimethylaniline	24,000 D	51,000
Methylene Chloride	400,000 D	1,200,000 D

MW-8SR

Date	11/04	6/05	11/05	6/06
Acetone	<1,200	81 J	15 J	49
Benzene	<500	13	13	15
Toluene	100 DJ	100	130	120
Ethylbenzene	<400	53	66	79
Xylene	184 DJ	180	260	260
Methanol	<1,000	<1,000	<1,000	<1,000
Trichloroethene	<500	<1.0	<1.0	<1.0
Aniline	35,000 D	30,000	32,000	23,000
N,N-dimethylaniline	5,300 D	<200	<260 J	<260
Methylene Chloride	10,000 D	<3.0	<3.0	<3.0

MW-25D

Date	6/04	6/05	6/06
Acetone	<25	<5.0 J	<5.0
Trichloroethene	<10	<1.0	<1.0
Aniline	<5.0	<1.0	<1.0
N,N-dimethylaniline	<5.0	<1.0	<1.0

MW-28

Date	10/03	6/04	11/04	6/05	11/05	6/06
Acetone	24	20 J	<120 (<25)	5.2 J	6.8 J (7.8 J)	<5.0J (<5.0 J)
Benzene	11	4 J	<50 (4 J)	4.3	18 (18.8)	8.0J (8.3 J)
Toluene	6	2 J	<50 (<10)	1.2 J	<5.0 (<5.0)	1.2 J (1.3 J)
Ethylbenzene	12	5 J	<50 (5 J)	4.6	4.7 (4.7)	5.3J (5.4 J)
Xylene	13 J	4 J	<100 (3 J)	3.9 J	<5.0 (<5.0)	4.2 J (4.3 J)
Methanol	<1,000	<1,000	190 J	<1,000	<1,000 (<1,000)	<500J (<1,000 J)
Trichloroethene	<5	<10	<50 (<10)	<1.0	<1.0 (<1.0)	<1.0J (<1.0 J)
Aniline	1,900 D	910 D	840 D J	1,430	380 (350)	430J (330 J)
N,N-dimethylaniline	<5.0	<5.0	<5.0	<5.0	<2.2 J (<2.1 J)	<2.1J (<5.0 J)
Methylene Chloride	<5.0	<10	<50 (<10)	<3.0	<3.0 (<3.0)	<3.0J (<3.0 J)

MW-23S

Date	10/03	6/04	11/04	6/05	11/05	6/06
Acetone	<12	<25	–	<5.0 J	<5.0 J	<5.0 J
Benzene	<5.0	<10	–	<1.0	<1.0	<1.0
Toluene	<5.0	<10	–	<5.0	<5.0	<5.0
Ethylbenzene	<5.0	<10	–	<4.0	<4.0	<4.0
Xylene	<10	<20	–	<5.0	<5.0	<5.0
Methanol	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000
Trichloroethene	<5.0	<10	–	<1.0	<1.0	<1.0
Aniline	60	<5.0	<5.0	<1.0	<1.0	<1.2
N,N-dimethylaniline	<5.0	<5.0	<5.0	<1.0	<1.0 J	<1.2
Methylene Chloride	<5.0	<10	–	<3.0	<3.0	<3.0

MW-25S

Date	10/03	6/04	11/04	6/05	11/05	6/06
Acetone	<12	<25	–	<5.0 J	<5.0 J	<5.0 J
Benzene	<5.0	<10	–	<1.0	<1.0	<1.0
Toluene	<5.0	<10	–	<4.0	<4.0	<4.0
Ethylbenzene	<5.0	<10	–	<5.0	<5.0	<5.0
Xylene	<10	<20	–	<5.0	<5.0	<5.0
Methanol	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000
Trichloroethene	<5.0	<10	–	<1.0	<1.0	<1.0
Aniline	<5.0	<5.0	<5	<1.1	<1.0	<1.0
N,N-dimethylaniline	<3.0	<5.0	<5.0	<1.1	<1.0 J	<1.0
Methylene Chloride	<5.0	<10	–	<3.0	<3.0	<3.0

MW-23I

Date	10/03	6/04	11/04	6/05	11/05	6/06
Acetone	<12	<25	–	<5.0 J	<5.0 J	<5.0 J
Benzene	<5.0	<10	–	<1.0	<1.0	<1.0
Toluene	<5.0	<10	–	<5.0	<5.0	0.6 J
Ethylbenzene	<5.0	<10	–	<4.0	<4.0	<4.0
Xylene	<10	<20	–	<5.0	<5.0	<5.0
Methanol	<1,000	<1,000	<1,000	<1,000	<1,000	<1,000
Trichloroethene	<5.0	1 J	<5.0	<1.0	<1.0	<1.0
N,N-Dimethylaniline	<5.0	<5.0	<5.0	<1.0	<1.0 J	<1.0
Methylene Chloride	<5.0	<10	–	<3.0	<3.0	<3.0

MW-29

Date	10/03	6/04	11/04	6/05	11/05	6/06
Acetone	<12	<25	<120	<5.0 J	<5.0 J	<5.0
Benzene	<5.0	<10	<50	<1.0	<1.0	<1.0
Toluene	<5.0	<10	<50	<5.0	<5.0	<5.0
Ethylbenzene	<5	<10	<50	<4.0	<4.0	<4.0
Xylene	<10	<20	<100	<5.0	<5.0	<5.0
Methanol	<1,000	<1,000	420 J	<1,000	<1,000	<1,000
Trichloroethene	<5.0	<10	<50	<1.0	<1.0	<1.0
Aniline	2 J	3 J	<5.0	<1.0	<1.0	<1.0
N,N-dimethylaniline	<5.0	<5.0	<5.0	<1.0	<1.0 J	<1.0
Methylene Chloride	<5.0	<10	<50	<3.0	<3.0	<3.0

LEGEND:

- UTILITY POLE
- CATCH BASIN
- PMO PETROLEUM PIPE LINE MARKER
- GMO GAS LINE MARKER
- HYDRANT
- WATER VALVE
- MANHOLE
- PROPERTY LINE
- EDGE OF WATER
- EDGE OF TREELINE
- TREE
- MW-19 GROUNDWATER MONITORING WELL
- PZ-A PIEZOMETER
- BIANNUAL DOWNGRADIENT PERIMETER GROUNDWATER MONITORING LOCATION
- MW-26S PUMPING WELL
- MW-8S REMOVED GROUNDWATER MONITORING WELL
- APPROXIMATE BOUNDARY OF AREA
- GROUNDWATER WITHDRAWAL TRENCH
- GROUNDWATER INFILTRATION TRENCH
- PIPING TO BUILDING
- PIPING FROM BUILDING

NOTES:

1. REPLACED MONITORING WELLS ARE IDENTIFIED WITH AN "R" (e.g., MW-24DR).
2. TRENCH LOCATIONS ARE APPROXIMATE.
3. MONITORING LOCATIONS ARE APPROXIMATE.
4. FIGURE ONLY SHOWS COC CONCENTRATIONS AT MONITORING LOCATIONS WITHIN THE IMPACTED AREAS AND THE CHEMICAL PROCESS CONTROL MONITORING LOCATIONS.
5. ONLY COC CONCENTRATIONS DETECTED OR HAVE BEEN DETECTED ARE PRESENTED ON THIS FIGURE (SEE ATTACHMENT A FIGURE 2).
6. < = COMPOUND WAS ANALYZED FOR BUT NOT DETECTED. THE ASSOCIATED VALUE IS THE COMPOUND QUANTITATION LIMIT.
7. J = THE COMPOUND WAS POSITIVELY IDENTIFIED; HOWEVER THE ASSOCIATED NUMERICAL VALUE IS AN ESTIMATED CONCENTRATION ONLY.
8. D = CONCENTRATION IS BASED ON DILUTED SAMPLE ANALYSIS.
9. R = THE SAMPLE RESULT WAS REJECTED.
10. E = THE COMPOUND WAS QUANTITATED ABOVE THE CALIBRATION RANGE.
11. THE 6/04 SAMPLING EVENT ANILINE AND N,N-DIMETHYLANILINE DATA FOR MW-18 WERE REJECTED DUE TO THE DEVIATION FROM A SURROGATE RECOVERY BELOW 10 PERCENT. THIS MONITORING WELL WAS NOT RESAMPLED.
12. DURING THE AUGUST 2004 SUPPLEMENTAL REMEDIAL ACTIVITIES, MONITORING WELL MW-8S WAS REMOVED AND MW-8SR WAS CONSTRUCTED DOWNGRADIENT OF THE SOIL REMOVAL AREA IN THE VICINITY OF MW-8S.
13. THE 11/04 SAMPLING EVENT VOLATILE ORGANIC COMPOUND (VOC) DATA FOR MW-17R, MW-18, MW-23I, MW-23S, MW-24DR, MW-24SR, MW-25S, PZ-5D, AND PZ-5S WERE INADVERTENTLY LOST DUE TO LABORATORY EQUIPMENT FAILURE. AS DETAILED IN THE BIANNUAL REPORT, THESE MONITORING WELLS WERE NOT RESAMPLED.
14. THE 11/04 SAMPLING EVENT VOC INITIAL DATA FOR MW-27, MW-28, MW-29, AND MW-30 WERE INADVERTENTLY LOST DUE TO LABORATORY EQUIPMENT FAILURE. HOWEVER, VALID DATA WAS OBTAINED FROM SUBSEQUENT DILUTIONS OF THESE SAMPLES, RESULTING IN HIGHER DETECTION LIMITS. THE VOC RESULTS OBTAINED FROM THE DUPLICATE SAMPLES COLLECTED AT MW-27 AND MW-28 HAVE LOWER DETECTION LIMITS AND ARE PRESENTED ON THIS FIGURE IN PARENTHESES.

SAMPLE IDENTIFICATION
CONCENTRATION (ppb)

MW-8S

Date	10/03	6/04
Acetone	21	<25
Benzene	25	49
Toluene	330 D	330 DJ
Ethylbenzene	93	110
Xylene	360	400
Methanol	1,200 J	<1,000
Trichloroethene	3,100 D	5,900 D
Aniline	67,000 D	56,000
N,N-dimethylaniline	24,000 D	51,000
Methylene Chloride	400,000 D	1,200,000 D

DETECTIONS EXCEEDING NYSDEC GROUNDWATER QUALITY STANDARDS ARE INDICATED BY SHADING.

0 100' 200'
GRAPHIC SCALE

McKESSON ENVIROSYSTEMS
FORMER BEAR STREET FACILITY
SYRACUSE, NEW YORK
BIANNUAL PROCESS CONTROL MONITORING REPORT

GROUNDWATER MONITORING DATA SUMMARY FOR OCTOBER 2003 - JUNE 2006 AREA 3

ARCADIS

FIGURE 4

CITY: SYRACUSE DIV/GROUP: ENVCAD DB: N.SMITHGALL L: FORAKER LD: PIC: D. ULM PM: D. PENNIMAN TM: D. PENNIMAN LYR: ON=*;OFF=*REF
G:\ENVCAD\SYRACUSE\ACTIVE\B0028003\0000\0501900\DWG\MARCH09\26003C02.DWG LAYOUT: 4 SAVED: 9/8/2009 12:27 PM ACADVER: 17.0S (LMS TECH) PAGESETUP: C-LB-PDF-CONV PLOTSTYLETABLE: PLTFULL.CTB PLOTTED: 9/8/2009 12:27 PM BY: STOWELL, GARY
XREFS: IMAGES: PROJECTNAME: ---
26003X01
26003X00

ARCADIS

Attachment B

Validated Analytical Laboratory Reports

ARCADIS
Infrastructure, environment, facilities

Imagine the result

McKesson Bear Street

Data Usability Summary Report

SYRACUSE, NEW YORK

Volatile, Semivolatile and Methanol Analyses

SDG #460-12688

Analyses Performed By:
TestAmerica Laboratories
Edison New Jersey

Report #12148R
Project: B0026003.0000.00010

SUMMARY

This data quality assessment summarizes the review of Sample Delivery Group (SDG) #460-12688 for samples collected in association with the McKesson Bear Street Site. Included with this assessment are the corrected sample results, sample compliance report, and chain of custody. Analyses were performed on the following samples:

Sample ID	Lab ID	Matrix	Sample Collection Date	Parent Sample	Analysis				
					VOC	SVOC	PCB	MET	MISC
MW-33	460-12688-1	Water	4/28/2010		X	X			X
TW-01	460-12688-2	Water	4/28/2010		X	X			X
MW-31	460-12688-3	Water	4/28/2010		X	X			X
MW-32	460-12688-4	Water	4/28/2010		X	X			X
MW-9S	460-12688-5	Water	4/28/2010		X	X			X
MW-1	460-12688-6	Water	4/28/2010		X	X			X
MW-3S	460-12688-7	Water	4/28/2010		X	X			X
MW-17R	460-12688-8	Water	4/28/2010		X	X			X
TB-042810	460-12688-9	Water	4/28/2010		X				

ANALYTICAL DATA PACKAGE DOCUMENTATION

The table below is the evaluation of the data package completeness.

Items Reviewed	Reported		Performance Acceptable		Not Required
	No	Yes	No	Yes	
1. Sample receipt condition		X		X	
2. Requested analyses and sample results		X		X	
3. Master tracking list		X		X	
4. Methods of analysis		X		X	
5. Reporting limits		X		X	
6. Sample collection date		X		X	
7. Laboratory sample received date		X		X	
8. Sample preservation verification (as applicable)		X		X	
9. Sample preparation/extraction/analysis dates		X		X	
10. Fully executed Chain-of-Custody (COC) form		X		X	
11. Narrative summary of QA or sample problems provided		X		X	
12. Data Package Completeness and Compliance		X		X	

QA - Quality Assurance

ORGANIC ANALYSIS INTRODUCTION

Analyses were performed according to United States Environmental Protection Agency (USEPA) SW-846 Method 8260B, 8270C, 8015B as referenced in NYSDEC ASP. Data were reviewed in accordance with USEPA National Functional Guidelines of October 1999/January 2005.

The data review process is an evaluation of data on a technical basis rather than a determination of contract compliance. As such, the standards against which the data are being weighed may differ from those specified in the analytical method. It is assumed that the data package represents the best efforts of the laboratory and had already been subjected to adequate and sufficient quality review prior to submission.

During the review process, laboratory qualified and unqualified data are verified against the supporting documentation. Based on this evaluation, qualifier codes may be added, deleted, or modified by the data reviewer. Results are qualified with the following codes in accordance with USEPA National Functional Guidelines:

- Concentration (C) Qualifiers

  U The compound was analyzed for but not detected. The associated value is the compound quantitation limit.

  B The compound has been found in the sample as well as its associated blank, its presence in the sample may be suspect.

- Quantitation (Q) Qualifiers

  E The compound was quantitated above the calibration range.

  D Concentration is based on a diluted sample analysis.

- Validation Qualifiers

  J The compound was positively identified; however, the associated numerical value is an estimated concentration only.

  UJ The compound was not detected above the reported sample quantitation limit. However, the reported limit is approximate and may or may not represent the actual limit of quantitation.

  JN The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification. The associated numerical value is an estimated concentration only.

  UB Compound considered non-detect at the listed value due to associated blank contamination.

  N The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification.

  R The sample results are rejected.

Two facts should be noted by all data users. First, the "R" flag means that the associated value is unusable. In other words, due to significant quality control (QC) problems, the analysis is invalid and provides no information as to whether the compound is present or not. "R" values should not appear on data tables because they cannot be relied upon, even as a last resort. The second fact to keep in mind is that no compound concentration, even if it has passed all QC tests, is guaranteed to be accurate. Strict QC serves to increase confidence in data but any value potentially contains error.

VOLATILE ORGANIC COMPOUND (VOC) ANALYSES

1. Holding Times

The specified holding times for the following methods are presented in the following table.

Method	Matrix	Holding Time	Preservation
SW-846 8260B	Water	14 days from collection to analysis	Cooled @ 4 °C; preserved to a pH of less than 2 s.u.
	Soil	48 hours from collection to extraction and 14 days from extraction to analysis	Cooled @ 4 °C.

s.u. Standard units

All samples were analyzed within the specified holding time criteria.

2. Blank Contamination

Quality assurance (QA) blanks (i.e., method and rinse blanks) are prepared to identify any contamination which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Rinse blanks measure contamination of samples during field operations.

A blank action level (BAL) of five times the concentration of a detected compound in an associated blank (common laboratory contaminant compounds are calculated at ten times) is calculated for QA blanks containing concentrations greater than the method detection limit (MDL). The BAL is compared to the associated sample results to determine the appropriate qualification of the sample results, if needed.

Compounds were not detected above the MDL in the associated blanks; therefore detected sample results were not associated with blank contamination.

3. Mass Spectrometer Tuning

Mass spectrometer performance was acceptable and all analyses were performed within a 12-hour tune clock.

System performance and column resolution were acceptable.

4. Calibration

Satisfactory instrument calibration is established to insure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of acceptable performance at the beginning of an experimental sequence. The continuing calibration verifies that the instrument daily performance is satisfactory.

4.1 Initial Calibration

The method specifies percent relative standard deviation (%RSD) and relative response factor (RRF) limits for select compounds only. A technical review of the data applies limits to all compounds with no exceptions.

All target compounds associated with the initial calibration standards must exhibit a %RSD less than the control limit (15%) or a correlation coefficient greater than 0.99 and an RRF value greater than control limit (0.05).

4.2 Continuing Calibration

All target compounds associated with the continuing calibration standard must exhibit a percent difference (%D) less than the control limit (20%) and RRF value greater than control limit (0.05).

All compounds associated with the calibrations were within the specified control limits.

5. Surrogates/System Monitoring Compounds

All samples to be analyzed for organic compounds are spiked with surrogate compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique. VOC analysis requires that all surrogates associated with the analysis exhibit recoveries within the laboratory-established acceptance limits.

All surrogate recoveries were within control limits.

6. Internal Standard Performance

Internal standard performance criteria insure that the GC/MS sensitivity and response are stable during every sample analysis. The criteria requires the internal standard compounds associated with the VOC exhibit area counts that are not greater than two times (+100%) or less than one-half (-50%) of the area counts of the associated continuing calibration standard.

All internal standard responses were within control limits.

7. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Analysis

MS/MSD data are used to assess the precision and accuracy of the analytical method. The compounds used to perform the MS/MSD analysis must exhibit a percent recovery within the laboratory-established acceptance limits. The relative percent difference (RPD) between the MS/MSD recoveries must exhibit an RPD within the laboratory-established acceptance limits.

Note: The MS/MSD recovery control limits do not apply for MS/MSD performed on sample locations where the compound concentration detected in the parent sample exceeds the MS/MSD concentration by a factor of four or greater.

The MS/MSD was not performed on a sample from this data set.

8. Laboratory Control Sample (LCS) Analysis

The LCS analysis is used to assess the precision and accuracy of the analytical method independent of matrix interferences. The compounds associated with the LCS analysis must exhibit a percent recovery within the laboratory-established acceptance limits.

All compounds associated with the LCS analysis exhibited recoveries within the control limits.

9. Field Duplicate Analysis

Field duplicate analysis is used to assess the precision and accuracy of the field sampling procedures and analytical method. A control limit of 50% for water matrices and 100% for soil matrices is applied to the RPD between the parent sample and the field duplicate. In the instance when the parent and/or duplicate sample concentrations are less than or equal to 5 times the RL, a control limit of two times the RL is applied for water matrices or three times the RL is applied for soil matrices.

A field duplicate was not included with this data set.

10. Compound Identification

Compounds are identified on the GC/MS by using the analytes relative retention time and ion spectra.

All identified compounds met the specified criteria.

11. System Performance and Overall Assessment

Overall system performance was acceptable. Other than for those deviations specifically mentioned in this review, the overall data quality is within the guidelines specified in the method.

DATA VALIDATION CHECKLIST FOR VOCs

VOCs: SW-846 8260	Reported		Performance Acceptable		Not Required
	No	Yes	No	Yes	
GAS CHROMATOGRAPHY/MASS SPECTROMETRY (GC/MS)					
Tier II Validation					
Holding times		X		X	
Reporting limits (units)		X		X	
Blanks					
A. Method blanks		X		X	
B. Equipment blanks		X		X	
C. Trip blanks		X		X	
Laboratory Control Sample (LCS)		X		X	
Laboratory Control Sample Duplicate(LCSD)					X
LCS/LCSD Precision (RPD)					X
Matrix Spike (MS)					X
Matrix Spike Duplicate(MSD)					X
MS/MSD Precision (RPD)					X
Field/Lab Duplicate (RPD)					X
Surrogate Spike Recoveries		X		X	
Dilution Factor		X		X	
Moisture Content		X		X	
Tier III Validation					
System performance and column resolution		X		X	
Initial calibration %RSDs		X		X	
Continuing calibration RRFs		X		X	
Continuing calibration %Ds		X		X	
Instrument tune and performance check		X		X	
Ion abundance criteria for each instrument used		X		X	
Internal standard		X		X	
Compound identification and quantitation					
A. Reconstructed ion chromatograms		X		X	
B. Quantitation Reports		X		X	
C. RT of sample compounds within the established RT windows		X		X	
D. Transcription/calculation errors present		X		X	

VOCs: SW-846 8260	Reported		Performance Acceptable		Not Required
	No	Yes	No	Yes	
GAS CHROMATOGRAPHY/MASS SPECTROMETRY (GC/MS)					
E. Reporting limits adjusted to reflect sample dilutions		X		X	

%RSD Relative standard deviation
%R Percent recovery
RPD Relative percent difference
%D Percent difference

SEMI-VOLATILE VOLATILE ORGANIC COMPOUND (SVOC) ANALYSES

1. Holding Times

The specified holding times for the following methods are presented in the following table.

Method	Matrix	Holding Time	Preservation
SW-846 8270C	Water	7 days from collection to extraction and 40 days from extraction to analysis	Cooled @ 4 °C
	Soil	14 days from collection to extraction and 40 days from extraction to analysis	Cooled @ 4 °C

All samples were analyzed within the specified holding time criteria.

2. Blank Contamination

Quality assurance (QA) blanks (i.e., method and rinse blanks) are prepared to identify any contamination which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Rinse blanks measure contamination of samples during field operations.

A blank action level (BAL) of five times the concentration of a detected compound in an associated blank (common laboratory contaminant compounds are calculated at ten times) is calculated for QA blanks containing concentrations greater than the method detection limit (MDL). The BAL is compared to the associated sample results to determine the appropriate qualification of the sample results, if needed.

Compounds were not detected above the MDL in the associated blanks; therefore detected sample results were not associated with blank contamination.

3. Mass Spectrometer Tuning

Mass spectrometer performance was acceptable and all analyses were performed within a 12-hour tune clock.

System performance and column resolution were acceptable.

4. Calibration

Satisfactory instrument calibration is established to insure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of acceptable performance at the beginning of an experimental sequence. The continuing calibration verifies that the instrument daily performance is satisfactory.

4.1 Initial Calibration

The method specifies percent relative standard deviation (%RSD) and relative response factor (RRF) limits for select compounds only. A technical review of the data applies limits to all compounds with no exceptions.

All target compounds associated with the initial calibration standards must exhibit a %RSD less than the control limit (15%) or a correlation coefficient greater than 0.99 and an RRF value greater than control limit (0.05).

4.2 Continuing Calibration

All target compounds associated with the continuing calibration standard must exhibit a percent difference (%D) less than the control limit (20%) and RRF value greater than control limit (0.05).

All compounds associated with the calibrations were within the specified control limits.

5. Surrogates/System Monitoring Compounds

All samples to be analyzed for organic compounds are spiked with surrogate compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique. SVOC analysis requires that two of the three SVOC surrogate compounds within each fraction exhibit recoveries within the laboratory-established acceptance limits.

All sample locations exhibited acceptable surrogate recoveries.

6. Internal Standard Performance

Internal standard performance criteria insure that the GC/MS sensitivity and response are stable during every sample analysis. The criteria requires the internal standard compounds associated with the SVOC exhibit area counts that are not greater than two times (+100%) or less than one-half (-50%) of the area counts of the associated continuing calibration standard.

All internal standard responses were within control limits.

7. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Analysis

MS/MSD data are used to assess the precision and accuracy of the analytical method. The compounds used to perform the MS/MSD analysis must exhibit a percent recovery within the laboratory-established acceptance limits. The relative percent difference (RPD) between the MS/MSD recoveries must exhibit an RPD within the laboratory-established acceptance limits.

Note: The MS/MSD recovery control limits do not apply for MS/MSD performed on sample locations where the compound concentration detected in the parent sample exceeds the MS/MSD concentration by a factor of four or greater.

A MS/MSD analysis was not performed on a sample location from this data set.

8. Laboratory Control Sample/Laboratory Control Sample Duplicate (LCS/LCSD) Analysis

The LCS/LCSD analysis is used to assess the precision and accuracy of the analytical method independent of matrix interferences. The compounds associated with the LCS/LCSD analysis must exhibit a percent recovery within the laboratory-established acceptance limits.

All compounds associated with the LCS/LCSD analysis exhibited recoveries within the control limits.

9. Field Duplicate Analysis

Field duplicate analysis is used to assess the precision and accuracy of the field sampling procedures and analytical method. A control limit of 50% for water matrices and 100% for soil matrices is applied to the RPD between the parent sample and the field duplicate. In the instance when the parent and/or duplicate sample concentrations are less than or equal to 5 times the RL, a control limit of two times the RL is applied for water matrices or three times the RL is applied for soil matrices.

A field duplicate was not included with this data set.

10. Compound Identification

Compounds are identified on the GC/MS by using the analytes relative retention time and ion spectra.

All identified compounds met the specified criteria.

11. System Performance and Overall Assessment

Overall system performance was acceptable. Other than for those deviations specifically mentioned in this review, the overall data quality is within the guidelines specified in the method.

DATA VALIDATION CHECKLIST FOR SVOCs

SVOCs: SW-846 8270	Reported		Performance Acceptable		Not Required
	No	Yes	No	Yes	
GAS CHROMATOGRAPHY/MASS SPECTROMETRY (GC/MS)					
Tier II Validation					
Holding times		X		X	
Reporting limits (units)		X		X	
Blanks					
D. Method blanks		X		X	
E. Equipment blanks					X
Laboratory Control Sample (LCS) %R		X		X	
Laboratory Control Sample Duplicate(LCSD) %R		X		X	
LCS/LCSD Precision (RPD)		X		X	
Matrix Spike (MS) %R					X
Matrix Spike Duplicate(MSD) %R					X
MS/MSD Precision (RPD)					X
Field/Lab Duplicate (RPD)					X
Surrogate Spike Recoveries		X		X	
Dilution Factor		X		X	
Moisture Content		X		X	
Tier III Validation					
System performance and column resolution		X		X	
Initial calibration %RSDs		X		X	
Continuing calibration RRFs		X		X	
Continuing calibration %Ds		X		X	
Instrument tune and performance check		X		X	
Ion abundance criteria for each instrument used		X		X	
Internal standard		X		X	
Compound identification and quantitation					
F. Reconstructed ion chromatograms		X		X	
G. Quantitation Reports		X		X	
H. RT of sample compounds within the established RT windows		X		X	
I. Transcription/calculation errors present		X		X	
J. Reporting limits adjusted to reflect sample dilutions		X		X	

%RSD Relative standard deviation
%R Percent recovery
RPD Relative percent difference
%D Percent difference

METHANOL (GC/FID) ANALYSES

1. Holding Times

The specified holding times for the following methods are presented in the following table.

Method	Matrix	Holding Time	Preservation
Methanol by SW846 8015B	Water	7 days from collection to analysis	Cooled @ 4 °C

All samples were extracted and analyzed within the specified holding times.

2. Blank Contamination

Quality assurance (QA) blanks (i.e., method and rinse blanks) are prepared to identify any contamination which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Rinse blanks measure contamination of samples during field operations.

A blank action level (BAL) of five times the concentration of a detected compound in an associated blank (common laboratory contaminant compounds are calculated at ten times) is calculated for QA blanks containing concentrations greater than the method detection limit (MDL). The BAL is compared to the associated sample results to determine the appropriate qualification of the sample results, if needed.

Compounds were not detected above the MDL in the associated blanks; therefore detected sample results were not associated with blank contamination.

3. Calibration

Satisfactory instrument calibration is established to insure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of acceptable performance at the beginning of an experimental sequence. The continuing calibration verifies that the instrument daily performance is satisfactory.

All target compounds associated with the initial calibration standards must exhibit a %RSD less than the control limit (15%) or a correlation coefficient greater than 0.99 and an RRF value greater than control limit (0.05).

All target compounds associated with the continuing calibration standard must exhibit a percent difference (%D) less then the control limit (20%) and RRF value greater than control limit (0.05).

All calibration verification standard recoveries were within the control limit.

4. Surrogates/System Monitoring Compounds

All samples to be analyzed for organic compounds are spiked with surrogate compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique. Methanol analysis requires the surrogate compound to exhibit recoveries within the laboratory-established acceptance limits.

All sample locations exhibited acceptable surrogate recoveries.

5. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Analysis

MS/MSD data are used to assess the precision and accuracy of the analytical method. The compounds used to perform the MS/MSD analysis must exhibit a percent recovery within the laboratory established acceptance limits. The relative percent difference (RPD) between the MS/MSD recoveries must exhibit a RPD within the laboratory established acceptance limits.

Note: The MS/MSD recovery control limits do not apply for MS/MSD performed on sample locations were the compounds concentration detected in the parent sample exceeds the MS/MSD concentration by a factor of four or greater.

A MS/MSD analysis was not performed on a sample location from this data set.

6. Laboratory Control Sample/Laboratory Control Sample Duplicate (LCS/LCSD) Analysis

The LCS analysis is used to assess the precision and accuracy of the analytical method independent of matrix interferences. The compounds associated with the LCS analysis must exhibit a percent recovery within the laboratory-established acceptance limits. The relative percent difference (RPD) between the LCS/LCSD recoveries must exhibit a RPD within the laboratory established acceptance limits.

All compounds associated with the LCS/LCSD analysis exhibited recoveries and RPD between LCS/LCSD recoveries within the control limits.

7. Field Duplicate Analysis

Field duplicate analysis is used to assess the precision and accuracy of the field sampling procedures and analytical method. A control limit of 50% for water matrices is applied to the RPD between the parent sample and the field duplicate. In the instance when the parent and/or duplicate sample concentrations are less than or equal to 5 times the RL, a control limit of two times the RL is applied for water matrices.

A field duplicate was not included with this data set.

8. System Performance and Overall Assessment

Overall system performance was acceptable. Other than for those deviations specifically mentioned in this review, the overall data quality is within the guidelines specified in the method.

DATA VALIDATION CHECKLIST FOR METHANOL

VOCs; SW-846 8015	Reported		Performance Acceptable		Not Required
	No	Yes	No	Yes	
GAS CHROMATOGRAPHY (GC/FID)					
Tier II Validation					
Holding times		X		X	
Reporting limits (units)		X		X	
Blanks					
A. Method blanks		X		X	
B. Equipment blanks					X
Laboratory Control Sample (LCS)		X		X	
Laboratory Control Sample Duplicate (LCSD)		X		X	
LCS/LCSD Precision (RPD)		X		X	
Matrix Spike (MS)					X
Matrix Spike Duplicate(MSD)					X
MS/MSD Precision (RPD)					X
Field/Lab Duplicate (%D)					X
Surrogate Spike Recoveries		X		X	
Dilution Factor		X		X	
Moisture Content					X
Tier III Validation					
System performance and column resolution		X		X	
Initial calibration %RSDs		X		X	
Continuing calibration RRFs		X		X	
Continuing calibration %Ds		X		X	
Compound identification and quantitation					
A. Quantitation Reports		X		X	
B. RT of sample compounds within the established RT windows		X		X	
C. Transcription/calculation errors present		X		X	
D. Reporting limits adjusted to reflect sample dilutions		X		X	

%RSD Percent relative difference
%R Percent recovery
RPD Relative percent difference
%D Percent difference

VALIDATION PERFORMED BY: Melissa Hall

SIGNATURE: Melissa Hall

DATE: May 17, 2010

PEER REVIEW: Dennis Capria

DATE: May 25, 2010

Sample Compliance Report

SAMPLE COMPLIANCE REPORT

Sample Delivery Group	Sampling Date	ASP Protocol	Sample ID	Matrix	Compliancy[1]					Non-compliance
					VOC	SVOC	PCB	MET	MISC	
460-12688	4/28/2010	ASP 2005	MW-33	Water	Yes	Yes	--	--	Yes	
460-12688	4/28/2010	ASP 2005	TW-01	Water	Yes	Yes	--	--	Yes	
460-12688	4/28/2010	ASP 2005	MW-31	Water	Yes	Yes	--	--	Yes	
460-12688	4/28/2010	ASP 2005	MW-32	Water	Yes	Yes	--	--	Yes	
460-12688	4/28/2010	ASP 2005	MW-9S	Water	Yes	Yes	--	--	Yes	
460-12688	4/28/2010	ASP 2005	MW-1	Water	Yes	Yes	--	--	Yes	
460-12688	4/28/2010	ASP 2005	MW-3S	Water	Yes	Yes	--	--	Yes	
460-12688	4/28/2010	ASP 2005	MW-17R	Water	Yes	Yes	--	--	Yes	
460-12688	4/28/2010	ASP 2005	TB-042810	Water	Yes	--	--	--	--	

1 Samples which are compliant with no added validation qualifiers are listed as "yes". Samples which are non-compliant or which have added qualifiers are listed as "no". A "no" designation does not necessarily indicate that the data have been rejected or are otherwise unusable.

CHAIN OF CUSTODY/
CORRECTED SAMPLE ANALYSIS DATA SHEETS

ARCADIS

Infrastructure, environment, facilities

Imagine the result

McKesson Bear Street

Data Usability Summary Report

SYRACUSE, NEW YORK

Volatile, Semivolatile and Methanol Analyses

SDG #460-12639

Analyses Performed By:
TestAmerica Laboratories
Edison New Jersey

Report #12149R
Project: B0026003.0000.00010

SUMMARY

This data quality assessment summarizes the review of Sample Delivery Group (SDG) #460-12639 for samples collected in association with the McKesson Bear Street Site. Included with this assessment are the corrected sample results, sample compliance report, and chain of custody. Analyses were performed on the following samples:

Sample ID	Lab ID	Matrix	Sample Collection Date	Parent Sample	Analysis				
					VOC	SVOC	PCB	MET	MISC
MW-27	460-12639-1	Water	4/27/2010		X	X			X
MW-29	460-12639-2	Water	4/27/2010		X	X			X
MW-8SR	460-12639-3	Water	4/27/2010		X	X			X
MW-28	460-12639-4	Water	4/27/2010		X	X			X
MW-30	460-12639-5	Water	4/27/2010		X	X			X
DUP-1	460-12639-6FD	Water	4/27/2010	MW-8SR	X	X			X
TB-042710	460-12639-7TB	Water	4/27/2010		X				

ANALYTICAL DATA PACKAGE DOCUMENTATION

The table below is the evaluation of the data package completeness.

Items Reviewed	Reported		Performance Acceptable		Not Required
	No	Yes	No	Yes	
1. Sample receipt condition		X		X	
2. Requested analyses and sample results		X		X	
3. Master tracking list		X		X	
4. Methods of analysis		X		X	
5. Reporting limits		X		X	
6. Sample collection date		X		X	
7. Laboratory sample received date		X		X	
8. Sample preservation verification (as applicable)		X		X	
9. Sample preparation/extraction/analysis dates		X		X	
10. Fully executed Chain-of-Custody (COC) form		X		X	
11. Narrative summary of QA or sample problems provided		X		X	
12. Data Package Completeness and Compliance		X		X	

QA - Quality Assurance

ORGANIC ANALYSIS INTRODUCTION

Analyses were performed according to United States Environmental Protection Agency (USEPA) SW-846 Method 8260B, 8270C, 8015B as referenced in NYSDEC ASP. Data were reviewed in accordance with USEPA National Functional Guidelines of October 1999/January 2005.

The data review process is an evaluation of data on a technical basis rather than a determination of contract compliance. As such, the standards against which the data are being weighed may differ from those specified in the analytical method. It is assumed that the data package represents the best efforts of the laboratory and had already been subjected to adequate and sufficient quality review prior to submission.

During the review process, laboratory qualified and unqualified data are verified against the supporting documentation. Based on this evaluation, qualifier codes may be added, deleted, or modified by the data reviewer. Results are qualified with the following codes in accordance with USEPA National Functional Guidelines:

- Concentration (C) Qualifiers

  U The compound was analyzed for but not detected. The associated value is the compound quantitation limit.

  B The compound has been found in the sample as well as its associated blank, its presence in the sample may be suspect.

- Quantitation (Q) Qualifiers

  E The compound was quantitated above the calibration range.

  D Concentration is based on a diluted sample analysis.

- Validation Qualifiers

  J The compound was positively identified; however, the associated numerical value is an estimated concentration only.

  UJ The compound was not detected above the reported sample quantitation limit. However, the reported limit is approximate and may or may not represent the actual limit of quantitation.

  JN The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification. The associated numerical value is an estimated concentration only.

  UB Compound considered non-detect at the listed value due to associated blank contamination.

  N The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification.

  R The sample results are rejected.

Two facts should be noted by all data users. First, the "R" flag means that the associated value is unusable. In other words, due to significant quality control (QC) problems, the analysis is invalid and provides no information as to whether the compound is present or not. "R" values should not appear on data tables because they cannot be relied upon, even as a last resort. The second fact to keep in mind is

that no compound concentration, even if it has passed all QC tests, is guaranteed to be accurate. Strict QC serves to increase confidence in data but any value potentially contains error.

VOLATILE ORGANIC COMPOUND (VOC) ANALYSES

1. Holding Times

The specified holding times for the following methods are presented in the following table.

Method	Matrix	Holding Time	Preservation
SW-846 8260B	Water	14 days from collection to analysis	Cooled @ 4 °C; preserved to a pH of less than 2 s.u.
	Soil	48 hours from collection to extraction and 14 days from extraction to analysis	Cooled @ 4 °C.

s.u. Standard units

All samples were analyzed within the specified holding time criteria.

2. Blank Contamination

Quality assurance (QA) blanks (i.e., method and rinse blanks) are prepared to identify any contamination which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Rinse blanks measure contamination of samples during field operations.

A blank action level (BAL) of five times the concentration of a detected compound in an associated blank (common laboratory contaminant compounds are calculated at ten times) is calculated for QA blanks containing concentrations greater than the method detection limit (MDL). The BAL is compared to the associated sample results to determine the appropriate qualification of the sample results, if needed.

Compounds were not detected above the MDL in the associated blanks; therefore detected sample results were not associated with blank contamination.

3. Mass Spectrometer Tuning

Mass spectrometer performance was acceptable and all analyses were performed within a 12-hour tune clock.

System performance and column resolution were acceptable.

4. Calibration

Satisfactory instrument calibration is established to insure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of acceptable performance at the beginning of an experimental sequence. The continuing calibration verifies that the instrument daily performance is satisfactory.

4.1 Initial Calibration

The method specifies percent relative standard deviation (%RSD) and relative response factor (RRF) limits for select compounds only. A technical review of the data applies limits to all compounds with no exceptions.

All target compounds associated with the initial calibration standards must exhibit a %RSD less than the control limit (15%) or a correlation coefficient greater than 0.99 and an RRF value greater than control limit (0.05).

4.2 Continuing Calibration

All target compounds associated with the continuing calibration standard must exhibit a percent difference (%D) less than the control limit (20%) and RRF value greater than control limit (0.05).

All compounds associated with the calibrations were within the specified control limits.

5. Surrogates/System Monitoring Compounds

All samples to be analyzed for organic compounds are spiked with surrogate compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique. VOC analysis requires that all surrogates associated with the analysis exhibit recoveries within the laboratory-established acceptance limits.

All surrogate recoveries were within control limits.

6. Internal Standard Performance

Internal standard performance criteria insure that the GC/MS sensitivity and response are stable during every sample analysis. The criteria requires the internal standard compounds associated with the VOC exhibit area counts that are not greater than two times (+100%) or less than one-half (-50%) of the area counts of the associated continuing calibration standard.

All internal standard responses were within control limits.

7. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Analysis

MS/MSD data are used to assess the precision and accuracy of the analytical method. The compounds used to perform the MS/MSD analysis must exhibit a percent recovery within the laboratory-established acceptance limits. The relative percent difference (RPD) between the MS/MSD recoveries must exhibit an RPD within the laboratory-established acceptance limits.

Note: The MS/MSD recovery control limits do not apply for MS/MSD performed on sample locations where the compound concentration detected in the parent sample exceeds the MS/MSD concentration by a factor of four or greater.

Sample locations associated with the MS/MSD exhibiting recoveries outside of the control limits are presented in the following table.

Sample Locations	Compound	MS Recovery	MSD Recovery
MW-8SR	Ethylbenzene	AC	<LL but >10%

AC Acceptable

The criteria used to evaluate the MS/MSD recoveries are presented in the following table. In the case of an MS/MSD deviation, the sample results are qualified as documented in the table below.

Control Limit	Sample Result	Qualification
> the upper control limit (UL)	Non-detect	No Action
	Detect	J
< the lower control limit (LL) but > 10%	Non-detect	UJ
	Detect	J
< 10%	Non-detect	R
	Detect	J
Parent sample concentration > four times the MS/MSD spiking solution concentration.	Detect	No Action
	Non-detect	

8. Laboratory Control Sample (LCS) Analysis

The LCS analysis is used to assess the precision and accuracy of the analytical method independent of matrix interferences. The compounds associated with the LCS analysis must exhibit a percent recovery within the laboratory-established acceptance limits.

All compounds associated with the LCS analysis exhibited recoveries within the control limits.

9. Field Duplicate Analysis

Field duplicate analysis is used to assess the precision and accuracy of the field sampling procedures and analytical method. A control limit of 50% for water matrices and 100% for soil matrices is applied to the RPD between the parent sample and the field duplicate. In the instance when the parent and/or duplicate sample concentrations are less than or equal to 5 times the RL, a control limit of two times the RL is applied for water matrices or three times the RL is applied for soil matrices.

Results for duplicate samples are summarized in the following table.

Sample ID/Duplicate ID	Compound	Sample Result	Duplicate Result	RPD
MW-8SR/DUP-1	Benzene	4.2	3.5	AC
	Toluene	4.6	3.7	AC
	Ethylbenzene	23	18	24.3%
	Xylenes, Total	41	33	21.6%

AC Acceptable
NC Not compliant
ND Not detected

The calculated RPDs between the parent sample and field duplicate were acceptable.

10. Compound Identification

Compounds are identified on the GC/MS by using the analytes relative retention time and ion spectra.

All identified compounds met the specified criteria.

11. System Performance and Overall Assessment

Overall system performance was acceptable. Other than for those deviations specifically mentioned in this review, the overall data quality is within the guidelines specified in the method.

DATA VALIDATION CHECKLIST FOR VOCs

VOCs: SW-846 8260	Reported		Performance Acceptable		Not Required
	No	Yes	No	Yes	
GAS CHROMATOGRAPHY/MASS SPECTROMETRY (GC/MS)					
Tier II Validation					
Holding times		X		X	
Reporting limits (units)		X		X	
Blanks					
A. Method blanks		X		X	
B. Equipment blanks		X		X	
C. Trip blanks		X		X	
Laboratory Control Sample (LCS)		X		X	
Laboratory Control Sample Duplicate(LCSD)					X
LCS/LCSD Precision (RPD)					X
Matrix Spike (MS)		X		X	
Matrix Spike Duplicate(MSD)		X	X		
MS/MSD Precision (RPD)		X		X	
Field/Lab Duplicate (RPD)					X
Surrogate Spike Recoveries		X		X	
Dilution Factor		X		X	
Moisture Content		X		X	
Tier III Validation					
System performance and column resolution		X		X	
Initial calibration %RSDs		X		X	
Continuing calibration RRFs		X		X	
Continuing calibration %Ds		X		X	
Instrument tune and performance check		X		X	
Ion abundance criteria for each instrument used		X		X	
Internal standard		X		X	
Compound identification and quantitation					
A. Reconstructed ion chromatograms		X		X	
B. Quantitation Reports		X		X	
C. RT of sample compounds within the established RT windows		X		X	
D. Transcription/calculation errors present		X		X	

VOCs: SW-846 8260	Reported		Performance Acceptable		Not Required
	No	Yes	No	Yes	
GAS CHROMATOGRAPHY/MASS SPECTROMETRY (GC/MS)					
E. Reporting limits adjusted to reflect sample dilutions		X		X	

%RSD Relative standard deviation
%R Percent recovery
RPD Relative percent difference
%D Percent difference

SEMI-VOLATILE VOLATILE ORGANIC COMPOUND (SVOC) ANALYSES

1. Holding Times

The specified holding times for the following methods are presented in the following table.

Method	Matrix	Holding Time	Preservation
SW-846 8270C	Water	7 days from collection to extraction and 40 days from extraction to analysis	Cooled @ 4 °C
	Soil	14 days from collection to extraction and 40 days from extraction to analysis	Cooled @ 4 °C

All samples were analyzed within the specified holding time criteria.

2. Blank Contamination

Quality assurance (QA) blanks (i.e., method and rinse blanks) are prepared to identify any contamination which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Rinse blanks measure contamination of samples during field operations.

A blank action level (BAL) of five times the concentration of a detected compound in an associated blank (common laboratory contaminant compounds are calculated at ten times) is calculated for QA blanks containing concentrations greater than the method detection limit (MDL). The BAL is compared to the associated sample results to determine the appropriate qualification of the sample results, if needed.

Compounds were not detected above the MDL in the associated blanks; therefore detected sample results were not associated with blank contamination.

3. Mass Spectrometer Tuning

Mass spectrometer performance was acceptable and all analyses were performed within a 12-hour tune clock.

System performance and column resolution were acceptable.

4. Calibration

Satisfactory instrument calibration is established to insure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of acceptable performance at the beginning of an experimental sequence. The continuing calibration verifies that the instrument daily performance is satisfactory.

4.1 Initial Calibration

The method specifies percent relative standard deviation (%RSD) and relative response factor (RRF) limits for select compounds only. A technical review of the data applies limits to all compounds with no exceptions.

All target compounds associated with the initial calibration standards must exhibit a %RSD less than the control limit (15%) or a correlation coefficient greater than 0.99 and an RRF value greater than control limit (0.05).

4.2 Continuing Calibration

All target compounds associated with the continuing calibration standard must exhibit a percent difference (%D) less than the control limit (20%) and RRF value greater than control limit (0.05).

All compounds associated with the calibrations were within the specified control limits.

5. Surrogates/System Monitoring Compounds

All samples to be analyzed for organic compounds are spiked with surrogate compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique. SVOC analysis requires that two of the three SVOC surrogate compounds within each fraction exhibit recoveries within the laboratory-established acceptance limits.

All sample locations exhibited acceptable recoveries.

6. Internal Standard Performance

Internal standard performance criteria insure that the GC/MS sensitivity and response are stable during every sample analysis. The criteria requires the internal standard compounds associated with the SVOC exhibit area counts that are not greater than two times (+100%) or less than one-half (-50%) of the area counts of the associated continuing calibration standard.

All internal standard responses were within control limits.

7. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Analysis

MS/MSD data are used to assess the precision and accuracy of the analytical method. The compounds used to perform the MS/MSD analysis must exhibit a percent recovery within the laboratory-established acceptance limits. The relative percent difference (RPD) between the MS/MSD recoveries must exhibit an RPD within the laboratory-established acceptance limits.

Note: The MS/MSD recovery control limits do not apply for MS/MSD performed on sample locations where the compound concentration detected in the parent sample exceeds the MS/MSD concentration by a factor of four or greater.

Sample locations associated with the MS/MSD exhibiting recoveries outside of the control limits are presented in the following table.

Sample Locations	Compound	MS Recovery	MSD Recovery
MW-8SR	Aniline	>UL	>UL

AC Acceptable

The criteria used to evaluate the MS/MSD recoveries are presented in the following table. In the case of an MS/MSD deviation, the sample results are qualified as documented in the table below.

Control Limit	Sample Result	Qualification
> the upper control limit (UL)	Non-detect	No Action
	Detect	J
< the lower control limit (LL) but > 10%	Non-detect	UJ
	Detect	J
< 10%	Non-detect	R
	Detect	J
Parent sample concentration > four times the MS/MSD spiking solution concentration.	Detect	No Action
	Non-detect	

8. Laboratory Control Sample (LCS) Analysis

The LCS analysis is used to assess the precision and accuracy of the analytical method independent of matrix interferences. The compounds associated with the LCS analysis must exhibit a percent recovery within the laboratory-established acceptance limits.

All compounds associated with the LCS analysis exhibited recoveries within the control limits.

9. Field Duplicate Analysis

Field duplicate analysis is used to assess the precision and accuracy of the field sampling procedures and analytical method. A control limit of 50% for water matrices and 100% for soil matrices is applied to the RPD between the parent sample and the field duplicate. In the instance when the parent and/or duplicate sample concentrations are less than or equal to 5 times the RL, a control limit of two times the RL is applied for water matrices or three times the RL is applied for soil matrices.

Results for duplicate samples are summarized in the following table.

Sample ID/Duplicate ID	Compound	Sample Result	Duplicate Result	RPD
MW-8SR/DUP-1	Aniline	370	720	64.2%
	n,n'-Dimethylaniline	1.0 J	ND (5.0)	AC

AC Acceptable
ND Not detected

The calculated RPDs between the parent sample and field duplicate were unacceptable for n,n'-Dimethylaniline. Sample results for the listed compound were qualified as estimated in associated sample locations MW-8SR and DUP-1.

10. Compound Identification

Compounds are identified on the GC/MS by using the analytes relative retention time and ion spectra.

All identified compounds met the specified criteria.

11. System Performance and Overall Assessment

Overall system performance was acceptable. Other than for those deviations specifically mentioned in this review, the overall data quality is within the guidelines specified in the method.

DATA VALIDATION CHECKLIST FOR SVOCs

SVOCs: SW-846 8270	Reported		Performance Acceptable		Not Required
	No	Yes	No	Yes	
GAS CHROMATOGRAPHY/MASS SPECTROMETRY (GC/MS)					
Tier II Validation					
Holding times		X		X	
Reporting limits (units)		X		X	
Blanks					
D. Method blanks		X		X	
E. Equipment blanks					X
Laboratory Control Sample (LCS) %R		X		X	
Laboratory Control Sample Duplicate(LCSD) %R		X		X	
LCS/LCSD Precision (RPD)		X		X	
Matrix Spike (MS) %R					X
Matrix Spike Duplicate(MSD) %R					X
MS/MSD Precision (RPD)					X
Field/Lab Duplicate (RPD)		X	X		
Surrogate Spike Recoveries		X		X	
Dilution Factor		X		X	
Moisture Content		X		X	
Tier III Validation					
System performance and column resolution		X		X	
Initial calibration %RSDs		X		X	
Continuing calibration RRFs		X		X	
Continuing calibration %Ds		X		X	
Instrument tune and performance check		X		X	
Ion abundance criteria for each instrument used		X		X	
Internal standard		X		X	
Compound identification and quantitation					
F. Reconstructed ion chromatograms		X		X	
G. Quantitation Reports		X		X	
H. RT of sample compounds within the established RT windows		X		X	
I. Transcription/calculation errors present		X		X	
J. Reporting limits adjusted to reflect sample dilutions		X		X	

%RSD Relative standard deviation
%R Percent recovery
RPD Relative percent difference
%D Percent difference

METHANOL (GC/FID) ANALYSES

1. Holding Times

The specified holding times for the following methods are presented in the following table.

Method	Matrix	Holding Time	Preservation
Methanol by SW846 8015B	Water	7 days from collection to analysis	Cooled @ 4 °C

All samples were extracted and analyzed within the specified holding times.

2. Blank Contamination

Quality assurance (QA) blanks (i.e., method and rinse blanks) are prepared to identify any contamination which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Rinse blanks measure contamination of samples during field operations.

A blank action level (BAL) of five times the concentration of a detected compound in an associated blank (common laboratory contaminant compounds are calculated at ten times) is calculated for QA blanks containing concentrations greater than the method detection limit (MDL). The BAL is compared to the associated sample results to determine the appropriate qualification of the sample results, if needed.

Compounds were not detected above the MDL in the associated blanks; therefore detected sample results were not associated with blank contamination.

3. Calibration

Satisfactory instrument calibration is established to insure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of acceptable performance at the beginning of an experimental sequence. The continuing calibration verifies that the instrument daily performance is satisfactory.

All target compounds associated with the initial calibration standards must exhibit a %RSD less than the control limit (15%) or a correlation coefficient greater than 0.99 and an RRF value greater than control limit (0.05).

All target compounds associated with the continuing calibration standard must exhibit a percent difference (%D) less then the control limit (20%) and RRF value greater than control limit (0.05).

All calibration verification standard recoveries were within the control limit.

4. Surrogates/System Monitoring Compounds

All samples to be analyzed for organic compounds are spiked with surrogate compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique. Methanol analysis requires the surrogate compound to exhibit recoveries within the laboratory-established acceptance limits.

All sample locations exhibited acceptable surrogate recoveries.

5. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Analysis

MS/MSD data are used to assess the precision and accuracy of the analytical method. The compounds used to perform the MS/MSD analysis must exhibit a percent recovery within the laboratory established acceptance limits. The relative percent difference (RPD) between the MS/MSD recoveries must exhibit a RPD within the laboratory established acceptance limits.

Note: The MS/MSD recovery control limits do not apply for MS/MSD performed on sample locations were the compounds concentration detected in the parent sample exceeds the MS/MSD concentration by a factor of four or greater.

The MS/MSD analysis exhibited acceptable recoveries and RPD between recoveries.

6. Laboratory Control Sample (LCS) Analysis

The LCS analysis is used to assess the precision and accuracy of the analytical method independent of matrix interferences. The compounds associated with the LCS analysis must exhibit a percent recovery within the laboratory-established acceptance limits.

All compounds associated with the LCS analysis exhibited recoveries within the control limits.

7. Field Duplicate Analysis

Field duplicate analysis is used to assess the precision and accuracy of the field sampling procedures and analytical method. A control limit of 50% for water matrices is applied to the RPD between the parent sample and the field duplicate. In the instance when the parent and/or duplicate sample concentrations are less than or equal to 5 times the RL, a control limit of two times the RL is applied for water matrices.

Results for duplicate samples are summarized in the following table.

Sample ID/Duplicate ID	Compound	Sample Result	Duplicate Result	RPD
MW-8SR/DUP-1	Methanol	ND	ND	AC

AC Acceptable
ND Not detected

The calculated RPDs between the parent sample and field duplicate were acceptable.

8. System Performance and Overall Assessment

Overall system performance was acceptable. Other than for those deviations specifically mentioned in this review, the overall data quality is within the guidelines specified in the method.

DATA VALIDATION CHECKLIST FOR METHANOL

VOCs; SW-846 8015	Reported		Performance Acceptable		Not Required
	No	Yes	No	Yes	
GAS CHROMATOGRAPHY (GC/FID)					
Tier II Validation					
Holding times		X		X	
Reporting limits (units)		X		X	
Blanks					
A. Method blanks		X		X	
B. Equipment blanks					X
Laboratory Control Sample (LCS)		X		X	
Laboratory Control Sample Duplicate (LCSD)		X		X	
LCS/LCSD Precision (RPD)		X		X	
Matrix Spike (MS)		X		X	
Matrix Spike Duplicate(MSD)		X		X	
MS/MSD Precision (RPD)		X		X	
Field/Lab Duplicate (%D)		X		X	
Surrogate Spike Recoveries		X		X	
Dilution Factor		X		X	
Moisture Content					X
Tier III Validation					
System performance and column resolution		X		X	
Initial calibration %RSDs		X		X	
Continuing calibration RRFs		X		X	
Continuing calibration %Ds		X		X	
Compound identification and quantitation					
A. Quantitation Reports		X		X	
B.RT of sample compounds within the established RT windows		X		X	
C.Transcription/calculation errors present		X		X	
D.Reporting limits adjusted to reflect sample dilutions		X		X	

%RSD Percent relative difference
%R Percent recovery
RPD Relative percent difference
%D Percent difference

VALIDATION PERFORMED BY: Melissa Hall

SIGNATURE: Melissa Hall

DATE: May 18, 2010

PEER REVIEW: Dennis Capria

DATE: May 25, 2010

Sample Compliance Report

SAMPLE COMPLIANCE REPORT

Sample Delivery Group	Sampling Date	ASP Protocol	Sample ID	Matrix	Compliancy[1]					Non-compliance
					VOC	SVOC	PCB	MET	MISC	
460-12639	4/27/2010	ASP 2005	MW-27	Water	Yes	Yes	--	--	Yes	
460-12639	4/27/2010	ASP 2005	MW-29	Water	Yes	Yes	--	--	Yes	
460-12639	4/27/2010	ASP 2005	MW-8SR	Water	No	No	--	--	Yes	VOC – MS/MSD %R SVOC – MS/MSD %R
460-12639	4/27/2010	ASP 2005	MW-28	Water	Yes	Yes	--	--	Yes	
460-12639	4/27/2010	ASP 2005	MW-30	Water	Yes	Yes	--	--	Yes	
460-12639	4/27/2010	ASP 2005	DUP-1	Water	Yes	Yes	--	--	Yes	
460-12639	4/27/2010	ASP 2005	TB-042710	Water	Yes	--	--	--	--	

1 Samples which are compliant with no added validation qualifiers are listed as "yes". Samples which are non-compliant or which have added qualifiers are listed as "no". A "no" designation does not necessarily indicate that the data have been rejected or are otherwise unusable.

CHAIN OF CUSTODY/
CORRECTED SAMPLE ANALYSIS DATA SHEETS

Client: ARCADIS

Job Number: 460-12639-1

Client Sample ID: MW-27

Lab Sample ID: 460-12639-1
Client Matrix: GW

Date Sampled: 04/27/2010 1345
Date Received: 04/28/2010 1030

8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 460-36108	Instrument ID: VOAMS4
Preparation:	5030B		Lab File ID: d18613.d
Dilution:	1.0		Initial Weight/Volume: 5 mL
Date Analyzed:	04/29/2010 1804		Final Weight/Volume: 5 mL
Date Prepared:	04/29/2010 1804		

Analyte	Result (ug/L)	Qualifier	MDL	RL
Methylene Chloride	1.0	U	0.19	1.0
Acetone	10	U	2.5	10
Trichloroethene	1.0	U	0.18	1.0
Benzene	4.5		0.13	1.0
Toluene	2.4		0.090	1.0
Ethylbenzene	6.1		0.25	1.0
Xylenes, Total	10		0.43	3.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	98		70 - 122
Bromofluorobenzene	96		69 - 135
Toluene-d8 (Surr)	95		69 - 125

Client: ARCADIS

Job Number: 460-12639-1

Client Sample ID: MW-29

Lab Sample ID: 460-12639-2
Client Matrix: GW

Date Sampled: 04/27/2010 1315
Date Received: 04/28/2010 1030

8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 460-36108	Instrument ID: VOAMS4
Preparation:	5030B		Lab File ID: d18610.d
Dilution:	1.0		Initial Weight/Volume: 5 mL
Date Analyzed:	04/29/2010 1651		Final Weight/Volume: 5 mL
Date Prepared:	04/29/2010 1651		

Analyte	Result (ug/L)	Qualifier	MDL	RL
Methylene Chloride	1.0	U	0.19	1.0
Acetone	10	U	2.5	10
Trichloroethene	1.0	U	0.18	1.0
Benzene	1.0	U	0.13	1.0
Toluene	1.0	U	0.090	1.0
Ethylbenzene	1.0	U	0.25	1.0
Xylenes, Total	3.0	U	0.43	3.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	101		70 - 122
Bromofluorobenzene	95		69 - 135
Toluene-d8 (Surr)	95		69 - 125

Client: ARCADIS

Job Number: 460-12639-1

MW-85R

Client Sample ID: ~~MW-85R~~

Lab Sample ID: 460-12639-3

Client Matrix: GW

Date Sampled: 04/27/2010 0910

Date Received: 04/28/2010 1030

8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 460-36108	Instrument ID: VOAMS4
Preparation:	5030B		Lab File ID: d18600.d
Dilution:	1.0		Initial Weight/Volume: 5 mL
Date Analyzed:	04/29/2010 1248		Final Weight/Volume: 5 mL
Date Prepared:	04/29/2010 1248		

Analyte	Result (ug/L)	Qualifier	MDL	RL
Methylene Chloride	1.0	U	0.19	1.0
Acetone	10	U	2.5	10
Trichloroethene	1.0	U	0.18	1.0
Benzene	4.2		0.13	1.0
Toluene	4.6		0.090	1.0
Ethylbenzene	23	J	0.25	1.0
Xylenes, Total	41		0.43	3.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	97		70 - 122
Bromofluorobenzene	98		69 - 135
Toluene-d8 (Surr)	94		69 - 125

Client: ARCADIS

Job Number: 460-12639-1

Client Sample ID: MW-28

Lab Sample ID: 460-12639-4
Client Matrix: GW

Date Sampled: 04/27/2010 1135
Date Received: 04/28/2010 1030

8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 460-36108	Instrument ID: VOAMS4
Preparation:	5030B		Lab File ID: d18611.d
Dilution:	1.0		Initial Weight/Volume: 5 mL
Date Analyzed:	04/29/2010 1715		Final Weight/Volume: 5 mL
Date Prepared:	04/29/2010 1715		

Analyte	Result (ug/L)	Qualifier	MDL	RL
Methylene Chloride	1.0	U	0.19	1.0
Acetone	10	U	2.5	10
Trichloroethene	1.0	U	0.18	1.0
Benzene	2.8		0.13	1.0
Toluene	0.23	J	0.090	1.0
Ethylbenzene	0.60	J	0.25	1.0
Xylenes, Total	0.46	J	0.43	3.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	98		70 - 122
Bromofluorobenzene	96		69 - 135
Toluene-d8 (Surr)	95		69 - 125

Client: ARCADIS

Job Number: 460-12639-1

Client Sample ID: MW-30

Lab Sample ID: 460-12639-5
Client Matrix: GW

Date Sampled: 04/27/2010 1525
Date Received: 04/28/2010 1030

8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 460-36108	Instrument ID: VOAMS4
Preparation:	5030B		Lab File ID: d18612.d
Dilution:	1.0		Initial Weight/Volume: 5 mL
Date Analyzed:	04/29/2010 1740		Final Weight/Volume: 5 mL
Date Prepared:	04/29/2010 1740		

Analyte	Result (ug/L)	Qualifier	MDL	RL
Methylene Chloride	1.0	U	0.19	1.0
Acetone	10	U	2.5	10
Trichloroethene	1.0	U	0.18	1.0
Benzene	1.0	U	0.13	1.0
Toluene	1.0	U	0.090	1.0
Ethylbenzene	1.0	U	0.25	1.0
Xylenes, Total	3.0	U	0.43	3.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	98		70 - 122
Bromofluorobenzene	95		69 - 135
Toluene-d8 (Surr)	96		69 - 125

Client: ARCADIS

Job Number: 460-12639-1

Client Sample ID: DUP-1

Lab Sample ID: 460-12639-6FD
Client Matrix: Water

Date Sampled: 04/27/2010 0000
Date Received: 04/28/2010 1030

8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 460-36108	Instrument ID: VOAMS4
Preparation:	5030B		Lab File ID: d18614.d
Dilution:	1.0		Initial Weight/Volume: 5 mL
Date Analyzed:	04/29/2010 1828		Final Weight/Volume: 5 mL
Date Prepared:	04/29/2010 1828		

Analyte	Result (ug/L)	Qualifier	MDL	RL
Methylene Chloride	1.0	U	0.19	1.0
Acetone	10	U	2.5	10
Trichloroethene	1.0	U	0.18	1.0
Benzene	3.5		0.13	1.0
Toluene	3.7		0.090	1.0
Ethylbenzene	18		0.25	1.0
Xylenes, Total	33		0.43	3.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	96		70 - 122
Bromofluorobenzene	96		69 - 135
Toluene-d8 (Surr)	95		69 - 125

Client: ARCADIS

Job Number: 460-12639-1

Client Sample ID: TB-042710

Lab Sample ID: 460-12639-7TB

Client Matrix: Water

Date Sampled: 04/27/2010 0000

Date Received: 04/28/2010 1030

8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 460-36108	Instrument ID: VOAMS4
Preparation:	5030B		Lab File ID: d18603.d
Dilution:	1.0		Initial Weight/Volume: 5 mL
Date Analyzed:	04/29/2010 1400		Final Weight/Volume: 5 mL
Date Prepared:	04/29/2010 1400		

Analyte	Result (ug/L)	Qualifier	MDL	RL
Methylene Chloride	1.0	U	0.19	1.0
Acetone	10	U	2.5	10
Trichloroethene	1.0	U	0.18	1.0
Benzene	1.0	U	0.13	1.0
Toluene	1.0	U	0.090	1.0
Ethylbenzene	1.0	U	0.25	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	98		70 - 122
Bromofluorobenzene	96		69 - 135
Toluene-d8 (Surr)	95		69 - 125

Client: ARCADIS

Job Number: 460-12639-1

Client Sample ID: MW-27

Lab Sample ID: 460-12639-1
Client Matrix: GW

Date Sampled: 04/27/2010 1345
Date Received: 04/28/2010 1030

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch: 460-36416	Instrument ID:	BNAMS11
Preparation:	3510C	Prep Batch: 460-36171	Lab File ID:	z9950.d
Dilution:	10		Initial Weight/Volume:	1000 mL
Date Analyzed:	05/01/2010 1518		Final Weight/Volume:	2 mL
Date Prepared:	04/29/2010 0226		Injection Volume:	

Analyte	Result (ug/L)	Qualifier	MDL	RL
Aniline	1300		17	50
n,n'-Dimethylaniline	10	U	2.7	10

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl	0	D	61 - 112
2-Fluorophenol	0	D	14 - 68
Nitrobenzene-d5	0	D	61 - 120
Phenol-d5	0	D	9 - 48
Terphenyl-d14	0	D	41 - 124
2,4,6-Tribromophenol	0	D	50 - 119

Client: ARCADIS

Job Number: 460-12639-1

Client Sample ID: MW-29

Lab Sample ID: 460-12639-2
Client Matrix: GW

Date Sampled: 04/27/2010 1315
Date Received: 04/28/2010 1030

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch: 460-36415	Instrument ID: BNAMS11
Preparation:	3510C	Prep Batch: 460-36171	Lab File ID: z9897.d
Dilution:	1.0		Initial Weight/Volume: 1000 mL
Date Analyzed:	04/30/2010 1421		Final Weight/Volume: 2 mL
Date Prepared:	04/29/2010 0226		Injection Volume:

Analyte	Result (ug/L)	Qualifier	MDL	RL
Aniline	5.0	U	1.7	5.0
n,n'-Dimethylaniline	1.0	U	0.27	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl	65		61 - 112
2-Fluorophenol	38		14 - 68
Nitrobenzene-d5	66		61 - 120
Phenol-d5	24		9 - 48
Terphenyl-d14	57		41 - 124
2,4,6-Tribromophenol	68		50 - 119

Client: ARCADIS

Job Number: 460-12639-1

MW. 8 SR

Client Sample ID: ~~MW-85R~~

Lab Sample ID: 460-12639-3

Client Matrix: GW

Date Sampled: 04/27/2010 0910

Date Received: 04/28/2010 1030

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch: 460-36416		Instrument ID:	BNAMS11
Preparation:	3510C	Prep Batch: 460-36171		Lab File ID:	z9946.d
Dilution:	2.0			Initial Weight/Volume:	1000 mL
Date Analyzed:	05/01/2010 1339			Final Weight/Volume:	2 mL
Date Prepared:	04/29/2010 0226			Injection Volume:	

Analyte	Result (ug/L)	Qualifier	MDL	RL
Aniline	370	J	3.5	10
n,n'-Dimethylaniline	1.0	J	0.54	2.0

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl	72		61 - 112
2-Fluorophenol	41		14 - 68
Nitrobenzene-d5	72		61 - 120
Phenol-d5	26		9 - 48
Terphenyl-d14	78		41 - 124
2,4,6-Tribromophenol	70		50 - 119

Client: ARCADIS

Job Number: 460-12639-1

Client Sample ID: MW-28

Lab Sample ID: 460-12639-4
Client Matrix: GW

Date Sampled: 04/27/2010 1135
Date Received: 04/28/2010 1030

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch: 460-36416	Instrument ID: BNAMS11
Preparation:	3510C	Prep Batch: 460-36171	Lab File ID: z9949.d
Dilution:	1.0		Initial Weight/Volume: 1000 mL
Date Analyzed:	05/01/2010 1453		Final Weight/Volume: 2 mL
Date Prepared:	04/29/2010 0226		Injection Volume:

Analyte	Result (ug/L)	Qualifier	MDL	RL
Aniline	5.0	U	1.7	5.0
n,n'-Dimethylaniline	0.49	J	0.27	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl	67		61 - 112
2-Fluorophenol	40		14 - 68
Nitrobenzene-d5	69		61 - 120
Phenol-d5	26		9 - 48
Terphenyl-d14	66		41 - 124
2,4,6-Tribromophenol	70		50 - 119

Client: ARCADIS

Job Number: 460-12639-1

Client Sample ID: MW-30

Lab Sample ID: 460-12639-5
Client Matrix: GW

Date Sampled: 04/27/2010 1525
Date Received: 04/28/2010 1030

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch: 460-36467		Instrument ID:	BNAMS11
Preparation:	3510C	Prep Batch: 460-36171		Lab File ID:	z9989.d
Dilution:	1.0			Initial Weight/Volume:	1000 mL
Date Analyzed:	05/03/2010 1331			Final Weight/Volume:	2 mL
Date Prepared:	04/29/2010 0226			Injection Volume:	

Analyte	Result (ug/L)	Qualifier	MDL	RL
Aniline	5.0	U	1.7	5.0
n,n'-Dimethylaniline	1.0	U	0.27	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl	72		61 - 112
2-Fluorophenol	52		14 - 68
Nitrobenzene-d5	77		61 - 120
Phenol-d5	34		9 - 48
Terphenyl-d14	79		41 - 124
2,4,6-Tribromophenol	83		50 - 119

Client: ARCADIS

Job Number: 460-12639-1

Client Sample ID: DUP-1

Lab Sample ID: 460-12639-6FD

Client Matrix: Water

Date Sampled: 04/27/2010 0000

Date Received: 04/28/2010 1030

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch: 460-36416	Instrument ID:	BNAMS11	
Preparation:	3510C	Prep Batch: 460-36171	Lab File ID:	z9951.d	
Dilution:	5.0		Initial Weight/Volume:	1000 mL	
Date Analyzed:	05/01/2010 1543		Final Weight/Volume:	2 mL	
Date Prepared:	04/29/2010 0226		Injection Volume:		

Analyte	Result (ug/L)	Qualifier	MDL	RL
Aniline	720	J	8.7	25
n,n'-Dimethylaniline	5.0	U	1.4	5.0

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl	82		61 - 112
2-Fluorophenol	45		14 - 68
Nitrobenzene-d5	78		61 - 120
Phenol-d5	28		9 - 48
Terphenyl-d14	82		41 - 124
2,4,6-Tribromophenol	65		50 - 119

Client: ARCADIS

Job Number: 460-12639-1

Client Sample ID: MW-27

Lab Sample ID: 460-12639-1
Client Matrix: GW

Date Sampled: 04/27/2010 1345
Date Received: 04/28/2010 1030

8015B Nonhalogenated Organic Compounds - Direct Injection (GC)

Method:	8015B	Analysis Batch: 460-36153	Instrument ID: BNAGC5
Preparation:	N/A		Initial Weight/Volume: 1 uL
Dilution:	1.0		Final Weight/Volume: 10 mL
Date Analyzed:	04/29/2010 0127		Injection Volume: 1 uL
Date Prepared:			Result Type: PRIMARY

Analyte	Result (ug/L)	Qualifier	RL	RL
Methanol	500	U	500	500

Surrogate	%Rec	Qualifier	Acceptance Limits
1-Pentanol	94		52 - 122

Client: ARCADIS

Job Number: 460-12639-1

Client Sample ID: MW-29

Lab Sample ID: 460-12639-2
Client Matrix: GW

Date Sampled: 04/27/2010 1315
Date Received: 04/28/2010 1030

8015B Nonhalogenated Organic Compounds - Direct Injection (GC)

Method:	8015B	Analysis Batch: 460-36153	Instrument ID: BNAGC5
Preparation:	N/A		Initial Weight/Volume: 1 uL
Dilution:	1.0		Final Weight/Volume: 10 mL
Date Analyzed:	04/29/2010 0133		Injection Volume: 1 uL
Date Prepared:			Result Type: PRIMARY

Analyte	Result (ug/L)	Qualifier	RL	RL
Methanol	500	U	500	500

Surrogate	%Rec	Qualifier	Acceptance Limits
1-Pentanol	86		52 - 122

Client: ARCADIS

Job Number: 460-12639-1

Client Sample ID: MW-8 SR ~~MW-85R~~

Lab Sample ID: 460-12639-3

Client Matrix: GW

Date Sampled: 04/27/2010 0910

Date Received: 04/28/2010 1030

8015B Nonhalogenated Organic Compounds - Direct Injection (GC)

Method:	8015B	Analysis Batch: 460-36153	Instrument ID: BNAGC5
Preparation:	N/A		Initial Weight/Volume: 1 uL
Dilution:	1.0		Final Weight/Volume: 10 mL
Date Analyzed:	04/29/2010 0140		Injection Volume: 1 uL
Date Prepared:			Result Type: PRIMARY

Analyte	Result (ug/L)	Qualifier	RL	RL
Methanol	500	U	500	500

Surrogate	%Rec	Qualifier	Acceptance Limits
1-Pentanol	75		52 - 122

Client: ARCADIS

Job Number: 460-12639-1

Client Sample ID: MW-28

Lab Sample ID: 460-12639-4
Client Matrix: GW

Date Sampled: 04/27/2010 1135
Date Received: 04/28/2010 1030

8015B Nonhalogenated Organic Compounds - Direct Injection (GC)

Method:	8015B	Analysis Batch: 460-36153	Instrument ID: BNAGC5
Preparation:	N/A		Initial Weight/Volume: 1 uL
Dilution:	1.0		Final Weight/Volume: 10 mL
Date Analyzed:	04/29/2010 0146		Injection Volume: 1 uL
Date Prepared:			Result Type: PRIMARY

Analyte	Result (ug/L)	Qualifier	RL	RL
Methanol	500	U	500	500

Surrogate	%Rec	Qualifier	Acceptance Limits
1-Pentanol	78		52 - 122

Client: ARCADIS

Job Number: 460-12639-1

Client Sample ID: MW-30

Lab Sample ID: 460-12639-5
Client Matrix: GW

Date Sampled: 04/27/2010 1525
Date Received: 04/28/2010 1030

8015B Nonhalogenated Organic Compounds - Direct Injection (GC)

Method:	8015B	Analysis Batch: 460-36153	Instrument ID: BNAGC5
Preparation:	N/A		Initial Weight/Volume: 1 uL
Dilution:	1.0		Final Weight/Volume: 10 mL
Date Analyzed:	04/29/2010 0152		Injection Volume: 1 uL
Date Prepared:			Result Type: PRIMARY

Analyte	Result (ug/L)	Qualifier	RL	RL
Methanol	500	U	500	500

Surrogate	%Rec	Qualifier	Acceptance Limits
1-Pentanol	94		52 - 122

Client: ARCADIS

Job Number: 460-12639-1

Client Sample ID: DUP-1

Lab Sample ID: 460-12639-6FD
Client Matrix: Water

Date Sampled: 04/27/2010 0000
Date Received: 04/28/2010 1030

8015B Nonhalogenated Organic Compounds - Direct Injection (GC)

Method:	8015B	Analysis Batch: 460-36153	Instrument ID: BNAGC5
Preparation:	N/A		Initial Weight/Volume: 1 uL
Dilution:	1.0		Final Weight/Volume: 10 mL
Date Analyzed:	04/29/2010 0159		Injection Volume: 1 uL
Date Prepared:			Result Type: PRIMARY

Analyte	Result (ug/L)	Qualifier	RL	RL
Methanol	500	U	500	500

Surrogate	%Rec	Qualifier	Acceptance Limits
1-Pentanol	84		52 - 122

Chain of Custody Record

Temperature on Receipt _____

Drinking Water? Yes ☐ No ☒

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TAL-4124 (1007)

Client	Project Manager	Date	Chain of Custody Number
ARCADIS	DAWN PENNIMAN	4/27/10	125700

Address	Telephone Number (Area Code)/Fax Number	Lab Number	Page 1 of 1
6723 TOWPATH RD	315-446-9120		

City	State	Zip Code	Site Contact	Lab Contact
SYRACUSE	NY	13204	NATE SMITH	JANAE McCloud

Project Name and Location (State)	Carrier/Waybill Number
B0026003.0000.00010	

Contract/Purchase Order/Quote No.
McKESSON BEAR ST. SYRACOSE NY 13214

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/ NaOH	Analysis: 8015B	8260B	8270C	MS/MSD	Special Instructions/ Conditions of Receipt
																	12639
MW-27	4/27/10	1345		X			5			3			X	X	X		1
MW-28	4/27/10	1315		X			5			3			X	X	X		2
MW-8SR	4/27/10	0910		X			15			9			X	X	X	X	3
MW-28	4/27/10	1135		X			5			3			X	X	X		4
MW-30	4/27/10	1525		X			5			3			X	X	X		5
DUP-1	4/27/10	—		X			5			3			X	X	X		6
TB-042710	4/27/10	—								3							7

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown

Sample Disposal
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required
☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☒ Other STANDARD

QC Requirements (Specify)

	Date	Time		Date	Time
1. Relinquished By	04-27-10	17:50	1. Received By RENSLG, SyR	04-27-10	17:50
2. Relinquished By RENSLG	04-27-10	18:00	2. Received By FedEx		
3. Relinquished By FedEx	4/28/10	10:30	3. Received By		

Comments

3.2 / 2.6 / 2.4 °C

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

05/11/2010

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ARCADIS
Infrastructure, environment, facilities

Imagine the result

McKesson Bear Street

Data Usability Summary Report

SYRACUSE, NEW YORK

Volatile, Semivolatile and Methanol Analyses

SDG #460-12745

Analyses Performed By:
TestAmerica Laboratories
Edison New Jersey

Report #12150R
Project: B0026003.0000.00010

SUMMARY

This data quality assessment summarizes the review of Sample Delivery Group (SDG) #460-12745 for samples collected in association with the McKesson Bear Street Site. Included with this assessment are the corrected sample results, sample compliance report, and chain of custody. Analyses were performed on the following samples:

Sample ID	Lab ID	Matrix	Sample Collection Date	Parent Sample	Analysis				
					VOC	SVOC	PCB	MET	MISC
MW-19	460-12745-1	Water	4/29/2010		X	X			X
PZ-4S	460-12745-2	Water	4/29/2010		X	X			X
PZ-4D	460-12745-3	Water	4/29/2010		X	X			X
MW-18	460-12745-4	Water	4/29/2010		X	X			X
MW-23S	460-12745-5	Water	4/29/2010		X	X			X
MW-25D	460-12745-6	Water	4/29/2010		X	X			X
MW-25S	460-12745-7	Water	4/29/2010		X	X			X
MW-23I	460-12745-8	Water	4/29/2010		X	X			X
TB-042910	460-12745-9TB	Water	4/29/2010		X				

ANALYTICAL DATA PACKAGE DOCUMENTATION

The table below is the evaluation of the data package completeness.

Items Reviewed	Reported		Performance Acceptable		Not Required
	No	Yes	No	Yes	
1. Sample receipt condition		X		X	
2. Requested analyses and sample results		X		X	
3. Master tracking list		X		X	
4. Methods of analysis		X		X	
5. Reporting limits		X		X	
6. Sample collection date		X		X	
7. Laboratory sample received date		X		X	
8. Sample preservation verification (as applicable)		X		X	
9. Sample preparation/extraction/analysis dates		X		X	
10. Fully executed Chain-of-Custody (COC) form		X		X	
11. Narrative summary of QA or sample problems provided		X		X	
12. Data Package Completeness and Compliance		X		X	

QA - Quality Assurance

ORGANIC ANALYSIS INTRODUCTION

Analyses were performed according to United States Environmental Protection Agency (USEPA) SW-846 Method 8260B, 8270C, 8015B as referenced in NYSDEC ASP. Data were reviewed in accordance with USEPA National Functional Guidelines of October 1999/January 2005.

The data review process is an evaluation of data on a technical basis rather than a determination of contract compliance. As such, the standards against which the data are being weighed may differ from those specified in the analytical method. It is assumed that the data package represents the best efforts of the laboratory and had already been subjected to adequate and sufficient quality review prior to submission.

During the review process, laboratory qualified and unqualified data are verified against the supporting documentation. Based on this evaluation, qualifier codes may be added, deleted, or modified by the data reviewer. Results are qualified with the following codes in accordance with USEPA National Functional Guidelines:

- Concentration (C) Qualifiers

  U The compound was analyzed for but not detected. The associated value is the compound quantitation limit.

  B The compound has been found in the sample as well as its associated blank, its presence in the sample may be suspect.

- Quantitation (Q) Qualifiers

  E The compound was quantitated above the calibration range.

  D Concentration is based on a diluted sample analysis.

- Validation Qualifiers

  J The compound was positively identified; however, the associated numerical value is an estimated concentration only.

  UJ The compound was not detected above the reported sample quantitation limit. However, the reported limit is approximate and may or may not represent the actual limit of quantitation.

  JN The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification. The associated numerical value is an estimated concentration only.

  UB Compound considered non-detect at the listed value due to associated blank contamination.

  N The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification.

  R The sample results are rejected.

Two facts should be noted by all data users. First, the "R" flag means that the associated value is unusable. In other words, due to significant quality control (QC) problems, the analysis is invalid and provides no information as to whether the compound is present or not. "R" values should not appear on data tables because they cannot be relied upon, even as a last resort. The second fact to keep in mind is that no compound concentration, even if it has passed all QC tests, is guaranteed to be accurate. Strict QC serves to increase confidence in data but any value potentially contains error.

VOLATILE ORGANIC COMPOUND (VOC) ANALYSES

1. Holding Times

The specified holding times for the following methods are presented in the following table.

Method	Matrix	Holding Time	Preservation
SW-846 8260B	Water	14 days from collection to analysis	Cooled @ 4 °C; preserved to a pH of less than 2 s.u.
	Soil	48 hours from collection to extraction and 14 days from extraction to analysis	Cooled @ 4 °C.

s.u. Standard units

All samples were analyzed within the specified holding time criteria.

2. Blank Contamination

Quality assurance (QA) blanks (i.e., method and rinse blanks) are prepared to identify any contamination which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Rinse blanks measure contamination of samples during field operations.

A blank action level (BAL) of five times the concentration of a detected compound in an associated blank (common laboratory contaminant compounds are calculated at ten times) is calculated for QA blanks containing concentrations greater than the method detection limit (MDL). The BAL is compared to the associated sample results to determine the appropriate qualification of the sample results, if needed.

Compounds were not detected above the MDL in the associated blanks; therefore detected sample results were not associated with blank contamination.

3. Mass Spectrometer Tuning

Mass spectrometer performance was acceptable and all analyses were performed within a 12-hour tune clock.

System performance and column resolution were acceptable.

4. Calibration

Satisfactory instrument calibration is established to insure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of acceptable performance at the beginning of an experimental sequence. The continuing calibration verifies that the instrument daily performance is satisfactory.

4.1 Initial Calibration

The method specifies percent relative standard deviation (%RSD) and relative response factor (RRF) limits for select compounds only. A technical review of the data applies limits to all compounds with no exceptions.

All target compounds associated with the initial calibration standards must exhibit a %RSD less than the control limit (15%) or a correlation coefficient greater than 0.99 and an RRF value greater than control limit (0.05).

4.2 Continuing Calibration

All target compounds associated with the continuing calibration standard must exhibit a percent difference (%D) less than the control limit (20%) and RRF value greater than control limit (0.05).

All target compounds associated with the continuing calibration standard must exhibit a percent difference (%D) less than the control limit (20%) and RRF value greater than control limit (0.05).

All compounds associated with the calibrations were within the specified control limits, with the exception of the compounds presented in the following table.

Sample Locations	Initial/Continuing	Compound	Criteria
MW-19 PZ-4S PZ-4D MW-18 MW-23S MW-25D MW-25S TB-042910	CCV %D	Acetone	26.8%

The criteria used to evaluate the initial and continuing calibration are presented in the following table. In the case of a calibration deviation, the sample results are qualified.

Initial/Continuing	Criteria	Sample Result	Qualification
Initial and Continuing Calibration	RRF <0.05	Non-detect	R
		Detect	J
	RRF <0.01[1]	Non-detect	R
		Detect	J
	RRF >0.05 or RRF >0.01[1]	Non-detect	No Action
		Detect	
Initial Calibration	%RSD > 15% or a correlation coefficient <0.99	Non-detect	UJ
		Detect	J
Continuing Calibration	%D >20% (increase in sensitivity)	Non-detect	No Action
		Detect	J
	%D >20% (decrease in sensitivity)	Non-detect	UJ
		Detect	J

[1] RRF of 0.01 only applies to compounds which are typically poor responding compounds (i.e., ketones, 1,4-dioxane, etc.)

5. Surrogates/System Monitoring Compounds

All samples to be analyzed for organic compounds are spiked with surrogate compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique. VOC analysis requires that all surrogates associated with the analysis exhibit recoveries within the laboratory-established acceptance limits.

All surrogate recoveries were within control limits.

6. Internal Standard Performance

Internal standard performance criteria insure that the GC/MS sensitivity and response are stable during every sample analysis. The criteria requires the internal standard compounds associated with the VOC exhibit area counts that are not greater than two times (+100%) or less than one-half (-50%) of the area counts of the associated continuing calibration standard.

All internal standard responses were within control limits.

7. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Analysis

MS/MSD data are used to assess the precision and accuracy of the analytical method. The compounds used to perform the MS/MSD analysis must exhibit a percent recovery within the laboratory-established acceptance limits. The relative percent difference (RPD) between the MS/MSD recoveries must exhibit an RPD within the laboratory-established acceptance limits.

Note: The MS/MSD recovery control limits do not apply for MS/MSD performed on sample locations where the compound concentration detected in the parent sample exceeds the MS/MSD concentration by a factor of four or greater.

Sample locations associated with the MS/MSD exhibiting recoveries outside of the control limits are presented in the following table.

Sample Locations	Compound	MS Recovery	MSD Recovery
PZ-4D	Methylene Chloride	<LL but >10%	AC

AC Acceptable

The criteria used to evaluate the MS/MSD recoveries are presented in the following table. In the case of an MS/MSD deviation, the sample results are qualified as documented in the table below.

Control Limit	Sample Result	Qualification
> the upper control limit (UL)	Non-detect	No Action
	Detect	J
< the lower control limit (LL) but > 10%	Non-detect	UJ
	Detect	J
< 10%	Non-detect	R
	Detect	J
Parent sample concentration > four times the MS/MSD spiking solution concentration.	Detect	No Action
	Non-detect	

8. Laboratory Control Sample (LCS) Analysis

The LCS analysis is used to assess the precision and accuracy of the analytical method independent of matrix interferences. The compounds associated with the LCS analysis must exhibit a percent recovery within the laboratory-established acceptance limits.

All compounds associated with the LCS analysis exhibited recoveries within the control limits.

9. Field Duplicate Analysis

Field duplicate analysis is used to assess the precision and accuracy of the field sampling procedures and analytical method. A control limit of 50% for water matrices and 100% for soil matrices is applied to the RPD between the parent sample and the field duplicate. In the instance when the parent and/or duplicate sample concentrations are less than or equal to 5 times the RL, a control limit of two times the RL is applied for water matrices or three times the RL is applied for soil matrices.

A field duplicate was not included with this data set.

10. Compound Identification

Compounds are identified on the GC/MS by using the analytes relative retention time and ion spectra.

All identified compounds met the specified criteria.

11. System Performance and Overall Assessment

Overall system performance was acceptable. Other than for those deviations specifically mentioned in this review, the overall data quality is within the guidelines specified in the method.

DATA VALIDATION CHECKLIST FOR VOCs

VOCs: SW-846 8260	Reported		Performance Acceptable		Not Required
	No	Yes	No	Yes	
GAS CHROMATOGRAPHY/MASS SPECTROMETRY (GC/MS)					
Tier II Validation					
Holding times		X		X	
Reporting limits (units)		X		X	
Blanks					
A. Method blanks		X		X	
B. Equipment blanks		X		X	
C. Trip blanks		X		X	
Laboratory Control Sample (LCS)		X		X	
Laboratory Control Sample Duplicate(LCSD)					X
LCS/LCSD Precision (RPD)					X
Matrix Spike (MS)		X	X		
Matrix Spike Duplicate(MSD)		X		X	
MS/MSD Precision (RPD)		X		X	
Field/Lab Duplicate (RPD)					X
Surrogate Spike Recoveries		X		X	
Dilution Factor		X		X	
Moisture Content		X		X	
Tier III Validation					
System performance and column resolution		X		X	
Initial calibration %RSDs		X		X	
Continuing calibration RRFs		X		X	
Continuing calibration %Ds		X	X		
Instrument tune and performance check		X		X	
Ion abundance criteria for each instrument used		X		X	
Internal standard		X		X	
Compound identification and quantitation					
A. Reconstructed ion chromatograms		X		X	
B. Quantitation Reports		X		X	
C. RT of sample compounds within the established RT windows		X		X	
D. Transcription/calculation errors present		X		X	

VOCs: SW-846 8260	Reported		Performance Acceptable		Not Required
	No	Yes	No	Yes	
GAS CHROMATOGRAPHY/MASS SPECTROMETRY (GC/MS)					
E. Reporting limits adjusted to reflect sample dilutions		X		X	

%RSD Relative standard deviation
%R Percent recovery
RPD Relative percent difference
%D Percent difference

SEMI-VOLATILE VOLATILE ORGANIC COMPOUND (SVOC) ANALYSES

1. Holding Times

The specified holding times for the following methods are presented in the following table.

Method	Matrix	Holding Time	Preservation
SW-846 8270C	Water	7 days from collection to extraction and 40 days from extraction to analysis	Cooled @ 4 °C
	Soil	14 days from collection to extraction and 40 days from extraction to analysis	Cooled @ 4 °C

All samples were analyzed within the specified holding time criteria.

2. Blank Contamination

Quality assurance (QA) blanks (i.e., method and rinse blanks) are prepared to identify any contamination which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Rinse blanks measure contamination of samples during field operations.

A blank action level (BAL) of five times the concentration of a detected compound in an associated blank (common laboratory contaminant compounds are calculated at ten times) is calculated for QA blanks containing concentrations greater than the method detection limit (MDL). The BAL is compared to the associated sample results to determine the appropriate qualification of the sample results, if needed.

Compounds were not detected above the MDL in the associated blanks; therefore detected sample results were not associated with blank contamination.

3. Mass Spectrometer Tuning

Mass spectrometer performance was acceptable and all analyses were performed within a 12-hour tune clock.

System performance and column resolution were acceptable.

4. Calibration

Satisfactory instrument calibration is established to insure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of acceptable performance at the beginning of an experimental sequence. The continuing calibration verifies that the instrument daily performance is satisfactory.

4.1 Initial Calibration

The method specifies percent relative standard deviation (%RSD) and relative response factor (RRF) limits for select compounds only. A technical review of the data applies limits to all compounds with no exceptions.

All target compounds associated with the initial calibration standards must exhibit a %RSD less than the control limit (15%) or a correlation coefficient greater than 0.99 and an RRF value greater than control limit (0.05).

4.2 Continuing Calibration

All target compounds associated with the continuing calibration standard must exhibit a percent difference (%D) less than the control limit (20%) and RRF value greater than control limit (0.05).

All compounds associated with the calibrations were within the specified control limits.

5. Surrogates/System Monitoring Compounds

All samples to be analyzed for organic compounds are spiked with surrogate compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique. SVOC analysis requires that two of the three SVOC surrogate compounds within each fraction exhibit recoveries within the laboratory-established acceptance limits.

Sample locations associated with surrogates exhibiting recoveries outside of the control limits presented in the following table.

Sample Locations	Surrogate	Recovery
MW-19	Phenol-d5	>UL
	2-Fluorophenol	AC
	2,4,6-Tribromophenol	AC
	Nitrobenzene-d5	AC
	2-Fluorobiphenyl	AC
	Terphenyl-d14	AC

UL Upper limit
AC Acceptable

The criteria used to evaluate the surrogate recoveries are presented in the following table. In the case of a surrogate deviation, the sample results associated with the deviant fraction are qualified as documented in the table below.

Control Limit	Sample Result	Qualification
> UL	Non-detect	No Action
	Detect	J
< LL but > 10%	Non-detect	UJ
	Detect	J
< 10%	Non-detect	R
	Detect	J
Surrogates diluted below the calibration curve due to the high concentration of a target compounds	Non-detect	J[1]
	Detect	

[1] A more concentrated analysis was not performed with surrogate compounds within the calibration range; therefore, no determination of extraction efficiency could be made.

6. Internal Standard Performance

Internal standard performance criteria insure that the GC/MS sensitivity and response are stable during every sample analysis. The criteria requires the internal standard compounds associated with the SVOC exhibit area counts that are not greater than two times (+100%) or less than one-half (-50%) of the area counts of the associated continuing calibration standard.

All internal standard responses were within control limits.

7. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Analysis

MS/MSD data are used to assess the precision and accuracy of the analytical method. The compounds used to perform the MS/MSD analysis must exhibit a percent recovery within the laboratory-established acceptance limits. The relative percent difference (RPD) between the MS/MSD recoveries must exhibit an RPD within the laboratory-established acceptance limits.

Note: The MS/MSD recovery control limits do not apply for MS/MSD performed on sample locations where the compound concentration detected in the parent sample exceeds the MS/MSD concentration by a factor of four or greater.

A MS/MSD analysis was not performed on a sample location from this data set.

8. Laboratory Control Sample (LCS) Analysis

The LCS analysis is used to assess the precision and accuracy of the analytical method independent of matrix interferences. The compounds associated with the LCS analysis must exhibit a percent recovery within the laboratory-established acceptance limits.

All compounds associated with the LCS analysis exhibited recoveries within the control limits.

9. Field Duplicate Analysis

Field duplicate analysis is used to assess the precision and accuracy of the field sampling procedures and analytical method. A control limit of 50% for water matrices and 100% for soil matrices is applied to the RPD between the parent sample and the field duplicate. In the instance when the parent and/or duplicate sample concentrations are less than or equal to 5 times the RL, a control limit of two times the RL is applied for water matrices or three times the RL is applied for soil matrices.

A field duplicate was not included with this data set.

10. Compound Identification

Compounds are identified on the GC/MS by using the analytes relative retention time and ion spectra.

All identified compounds met the specified criteria.

11. System Performance and Overall Assessment

Overall system performance was acceptable. Other than for those deviations specifically mentioned in this review, the overall data quality is within the guidelines specified in the method.

DATA VALIDATION CHECKLIST FOR SVOCs

SVOCs: SW-846 8270	Reported		Performance Acceptable		Not Required
	No	Yes	No	Yes	
GAS CHROMATOGRAPHY/MASS SPECTROMETRY (GC/MS)					
Tier II Validation					
Holding times		X		X	
Reporting limits (units)		X		X	
Blanks					
D. Method blanks		X		X	
E. Equipment blanks					X
Laboratory Control Sample (LCS) %R		X		X	
Laboratory Control Sample Duplicate(LCSD) %R					X
LCS/LCSD Precision (RPD)					X
Matrix Spike (MS) %R					X
Matrix Spike Duplicate(MSD) %R					X
MS/MSD Precision (RPD)					X
Field/Lab Duplicate (RPD)					X
Surrogate Spike Recoveries		X	X		
Dilution Factor		X		X	
Moisture Content		X		X	
Tier III Validation					
System performance and column resolution		X		X	
Initial calibration %RSDs		X		X	
Continuing calibration RRFs		X		X	
Continuing calibration %Ds		X		X	
Instrument tune and performance check		X		X	
Ion abundance criteria for each instrument used		X		X	
Internal standard		X		X	
Compound identification and quantitation					
F. Reconstructed ion chromatograms		X		X	
G. Quantitation Reports		X		X	
H. RT of sample compounds within the established RT windows		X		X	
I. Transcription/calculation errors present		X		X	
J. Reporting limits adjusted to reflect sample dilutions		X		X	

%RSD Relative standard deviation
%R Percent recovery
RPD Relative percent difference
%D Percent difference

METHANOL (GC/FID) ANALYSES

1. Holding Times

The specified holding times for the following methods are presented in the following table.

Method	Matrix	Holding Time	Preservation
Methanol by SW846 8015B	Water	7 days from collection to analysis	Cooled @ 4 °C

All samples were extracted and analyzed within the specified holding times.

2. Blank Contamination

Quality assurance (QA) blanks (i.e., method and rinse blanks) are prepared to identify any contamination which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Rinse blanks measure contamination of samples during field operations.

A blank action level (BAL) of five times the concentration of a detected compound in an associated blank (common laboratory contaminant compounds are calculated at ten times) is calculated for QA blanks containing concentrations greater than the method detection limit (MDL). The BAL is compared to the associated sample results to determine the appropriate qualification of the sample results, if needed.

Compounds were not detected above the MDL in the associated blanks; therefore detected sample results were not associated with blank contamination.

3. Calibration

Satisfactory instrument calibration is established to insure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of acceptable performance at the beginning of an experimental sequence. The continuing calibration verifies that the instrument daily performance is satisfactory.

All target compounds associated with the initial calibration standards must exhibit a %RSD less than the control limit (15%) or a correlation coefficient greater than 0.99 and an RRF value greater than control limit (0.05).

All target compounds associated with the continuing calibration standard must exhibit a percent difference (%D) less then the control limit (20%) and RRF value greater than control limit (0.05).

All calibration verification standard recoveries were within the control limit.

4. Surrogates/System Monitoring Compounds

All samples to be analyzed for organic compounds are spiked with surrogate compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique. Methanol analysis requires the surrogate compound to exhibit recoveries within the laboratory-established acceptance limits.

Sample locations associated with surrogates exhibiting recoveries outside of the control limits presented in the following table.

Sample Locations	Surrogate	Recovery
MW-19	1-Pentanol	>UL

UL Upper limit

The criteria used to evaluate the surrogate recoveries are presented in the following table. In the case of a surrogate deviation, the sample results associated with the deviant fraction are qualified as documented in the table below.

Control Limit	Sample Result	Qualification
> UL	Non-detect	No Action
	Detect	J
< LL but > 10%	Non-detect	UJ
	Detect	J
< 10%	Non-detect	R
	Detect	J
Surrogates diluted below the calibration curve due to the high concentration of a target compounds	Non-detect	J[1]
	Detect	

[1] A more concentrated analysis was not performed with surrogate compounds within the calibration range; therefore, no determination of extraction efficiency could be made.

5. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Analysis

MS/MSD data are used to assess the precision and accuracy of the analytical method. The compounds used to perform the MS/MSD analysis must exhibit a percent recovery within the laboratory established acceptance limits. The relative percent difference (RPD) between the MS/MSD recoveries must exhibit a RPD within the laboratory established acceptance limits.

Note: The MS/MSD recovery control limits do not apply for MS/MSD performed on sample locations were the compounds concentration detected in the parent sample exceeds the MS/MSD concentration by a factor of four or greater.

A MS/MSD analysis was not performed on a sample location from this data set.

6. Laboratory Control Sample/Laboratory Control Sample Duplicate (LCS/LCSD) Analysis

The LCS analysis is used to assess the precision and accuracy of the analytical method independent of matrix interferences. The compounds associated with the LCS analysis must exhibit a percent recovery within the laboratory-established acceptance limits. The relative percent difference (RPD) between the LCS/LCSD recoveries must exhibit a RPD within the laboratory established acceptance limits.

All compounds associated with the LCS/LCSD analysis exhibited recoveries and RPD between LCS/LCSD recoveries within the control limits.

7. Field Duplicate Analysis

Field duplicate analysis is used to assess the precision and accuracy of the field sampling procedures and analytical method. A control limit of 50% for water matrices is applied to the RPD between the parent sample and the field duplicate. In the instance when the parent and/or duplicate sample concentrations are less than or equal to 5 times the RL, a control limit of two times the RL is applied for water matrices.

A field duplicate was not included with this data set.

8. System Performance and Overall Assessment

Overall system performance was acceptable. Other than for those deviations specifically mentioned in this review, the overall data quality is within the guidelines specified in the method.

DATA VALIDATION CHECKLIST FOR METHANOL

VOCs; SW-846 8015	Reported		Performance Acceptable		Not Required
	No	Yes	No	Yes	
GAS CHROMATOGRAPHY (GC/FID)					
Tier II Validation					
Holding times		X		X	
Reporting limits (units)		X		X	
Blanks					
A. Method blanks		X		X	
B. Equipment blanks					X
Laboratory Control Sample (LCS)		X		X	
Laboratory Control Sample Duplicate (LCSD)		X		X	
LCS/LCSD Precision (RPD)		X		X	
Matrix Spike (MS)					X
Matrix Spike Duplicate(MSD)					X
MS/MSD Precision (RPD)					X
Field/Lab Duplicate (%D)					X
Surrogate Spike Recoveries		X	X		
Dilution Factor		X		X	
Moisture Content					X
Tier III Validation					
System performance and column resolution		X		X	
Initial calibration %RSDs		X		X	
Continuing calibration RRFs		X		X	
Continuing calibration %Ds		X		X	
Compound identification and quantitation					
A. Quantitation Reports		X		X	
B. RT of sample compounds within the established RT windows		X		X	
C. Transcription/calculation errors present		X		X	
D. Reporting limits adjusted to reflect sample dilutions		X		X	

%RSD Percent relative difference
%R Percent recovery
RPD Relative percent difference
%D Percent difference

VALIDATION PERFORMED BY: Melissa Hall

SIGNATURE: Melissa Hall

DATE: May 18, 2010

PEER REVIEW: Dennis Capria

DATE: May 25, 2010

Sample Compliance Report

SAMPLE COMPLIANCE REPORT

Sample Delivery Group	Sampling Date	ASP Protocol	Sample ID	Matrix	Compliancy[1]					Non-compliance
					VOC	SVOC	PCB	MET	MISC	
460-12745	4/29/2010	ASP 2005	MW-19	Water	No	Yes	--	--	No	VOC – CCAL MISC – surrogate recovery
460-12745	4/29/2010	ASP 2005	PZ-4S	Water	No	Yes	--	--	Yes	VOC – CCAL
460-12745	4/29/2010	ASP 2005	PZ-4D	Water	No	Yes	--	--	Yes	VOC – CCAL, MS/MSD %R
460-12745	4/29/2010	ASP 2005	MW-18	Water	No	Yes	--	--	Yes	VOC – CCAL
460-12745	4/29/2010	ASP 2005	MW-23S	Water	No	Yes	--	--	Yes	VOC – CCAL
460-12745	4/29/2010	ASP 2005	MW-25D	Water	No	Yes	--	--	Yes	VOC – CCAL
460-12745	4/29/2010	ASP 2005	MW-25S	Water	No	Yes	--	--	Yes	VOC – CCAL
460-12745	4/29/2010	ASP 2005	MW-23I	Water	Yes	Yes	--	--	Yes	
460-12745	4/29/2010	ASP 2005	TB-042910	Water	No	--	--	--	--	VOC – CCAL

1 Samples which are compliant with no added validation qualifiers are listed as "yes". Samples which are non-compliant or which have added qualifiers are listed as "no". A "no" designation does not necessarily indicate that the data have been rejected or are otherwise unusable.

CHAIN OF CUSTODY/
CORRECTED SAMPLE ANALYSIS DATA SHEETS

Client: ARCADIS

Job Number: 460-12745-1

Client Sample ID: **MW-19**

Lab Sample ID: 460-12745-1
Client Matrix: Water

Date Sampled: 04/29/2010 1030
Date Received: 04/30/2010 1015

8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 460-36573	Instrument ID: VOAMS3
Preparation:	5030B		Lab File ID: c48055.d
Dilution:	1.0		Initial Weight/Volume: 5 mL
Date Analyzed:	05/05/2010 1221		Final Weight/Volume: 5 mL
Date Prepared:	05/05/2010 1221		

Analyte	Result (ug/L)	Qualifier	MDL	RL
Methylene Chloride	1.0	U	0.19	1.0
Acetone	10	U	2.5	10
Trichloroethene	1.0	U	0.18	1.0
Benzene	1.0	U	0.13	1.0
Toluene	1.0	U	0.090	1.0
Ethylbenzene	1.0	U	0.25	1.0
Xylenes, Total	3.0	U	0.43	3.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	117		70 - 122
Bromofluorobenzene	100		69 - 135
Toluene-d8 (Surr)	102		69 - 125

Client: ARCADIS

Job Number: 460-12745-1

Client Sample ID: PZ-4S

Lab Sample ID: 460-12745-2
Client Matrix: Water

Date Sampled: 04/29/2010 1200
Date Received: 04/30/2010 1015

8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 460-36573	Instrument ID: VOAMS3
Preparation:	5030B		Lab File ID: c48056.d
Dilution:	1.0		Initial Weight/Volume: 5 mL
Date Analyzed:	05/05/2010 1245		Final Weight/Volume: 5 mL
Date Prepared:	05/05/2010 1245		

Analyte	Result (ug/L)	Qualifier	MDL	RL
Methylene Chloride	17		0.19	1.0
Acetone	10	U	2.5	10
Trichloroethene	1.0	U	0.18	1.0
Benzene	1.0	U	0.13	1.0
Toluene	1.0	U	0.090	1.0
Ethylbenzene	1.0	U	0.25	1.0
Xylenes, Total	3.0	U	0.43	3.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	115		70 - 122
Bromofluorobenzene	96		69 - 135
Toluene-d8 (Surr)	98		69 - 125

Client: ARCADIS

Job Number: 460-12745-1

Client Sample ID: PZ-4D

Lab Sample ID: 460-12745-3
Client Matrix: Water

Date Sampled: 04/29/2010 1315
Date Received: 04/30/2010 1015

8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 460-36573	Instrument ID: VOAMS3
Preparation:	5030B		Lab File ID: c48054.d
Dilution:	1.0		Initial Weight/Volume: 5 mL
Date Analyzed:	05/05/2010 1157		Final Weight/Volume: 5 mL
Date Prepared:	05/05/2010 1157		

Analyte	Result (ug/L)	Qualifier	MDL	RL
Methylene Chloride	5.3	J	0.19	1.0
Acetone	10	U	2.5	10
Trichloroethene	1.0	U	0.18	1.0
Benzene	1.0	U	0.13	1.0
Toluene	1.0	U	0.090	1.0
Ethylbenzene	1.0	U	0.25	1.0
Xylenes, Total	3.0	U	0.43	3.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	110		70 - 122
Bromofluorobenzene	95		69 - 135
Toluene-d8 (Surr)	99		69 - 125

Client: ARCADIS

Job Number: 460-12745-1

Client Sample ID: MW-18

Lab Sample ID: 460-12745-4
Client Matrix: Water

Date Sampled: 04/29/2010 1530
Date Received: 04/30/2010 1015

8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 460-36573	Instrument ID: VOAMS3
Preparation:	5030B		Lab File ID: c48057.d
Dilution:	1.0		Initial Weight/Volume: 5 mL
Date Analyzed:	05/05/2010 1310		Final Weight/Volume: 5 mL
Date Prepared:	05/05/2010 1310		

Analyte	Result (ug/L)	Qualifier	MDL	RL
Methylene Chloride	33		0.19	1.0
Acetone	10	U	2.5	10
Trichloroethene	1.0	U	0.18	1.0
Benzene	1.0	U	0.13	1.0
Toluene	1.0	U	0.090	1.0
Ethylbenzene	1.0	U	0.25	1.0
Xylenes, Total	3.0	U	0.43	3.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	118		70 - 122
Bromofluorobenzene	99		69 - 135
Toluene-d8 (Surr)	102		69 - 125

Client: ARCADIS

Job Number: 460-12745-1

Client Sample ID: **MW-23S**

Lab Sample ID: 460-12745-5
Client Matrix: Water

Date Sampled: 04/29/2010 1555
Date Received: 04/30/2010 1015

8260B Volatile Organic Compounds (GC/MS)

Method: 8260B
Preparation: 5030B
Dilution: 1.0
Date Analyzed: 05/05/2010 1334
Date Prepared: 05/05/2010 1334

Analysis Batch: 460-36573

Instrument ID: VOAMS3
Lab File ID: c48058.d
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Methylene Chloride	1.0	U	0.19	1.0
Acetone	10	U	2.5	10
Trichloroethene	1.0	U	0.18	1.0
Benzene	1.0	U	0.13	1.0
Toluene	1.0	U	0.090	1.0
Ethylbenzene	1.0	U	0.25	1.0
Xylenes, Total	3.0	U	0.43	3.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	112		70 - 122
Bromofluorobenzene	95		69 - 135
Toluene-d8 (Surr)	100		69 - 125

Client: ARCADIS

Job Number: 460-12745-1

Client Sample ID: **MW-25D**

Lab Sample ID: 460-12745-6
Client Matrix: Water

Date Sampled: 04/29/2010 1120
Date Received: 04/30/2010 1015

8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 460-36573	Instrument ID: VOAMS3
Preparation:	5030B		Lab File ID: c48059.d
Dilution:	1.0		Initial Weight/Volume: 5 mL
Date Analyzed:	05/05/2010 1358		Final Weight/Volume: 5 mL
Date Prepared:	05/05/2010 1358		

Analyte	Result (ug/L)	Qualifier	MDL	RL
Methylene Chloride	1.0	U	0.19	1.0
Acetone	10	U	2.5	10
Trichloroethene	1.0	U	0.18	1.0
Benzene	1.0	U	0.13	1.0
Toluene	1.0	U	0.090	1.0
Ethylbenzene	1.0	U	0.25	1.0
Xylenes, Total	3.0	U	0.43	3.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	109		70 - 122
Bromofluorobenzene	95		69 - 135
Toluene-d8 (Surr)	103		69 - 125

Client: ARCADIS

Job Number: 460-12745-1

Client Sample ID: MW-25S

Lab Sample ID: 460-12745-7
Client Matrix: Water

Date Sampled: 04/29/2010 1240
Date Received: 04/30/2010 1015

8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 460-36573	Instrument ID: VOAMS3
Preparation:	5030B		Lab File ID: c48060.d
Dilution:	1.0		Initial Weight/Volume: 5 mL
Date Analyzed:	05/05/2010 1422		Final Weight/Volume: 5 mL
Date Prepared:	05/05/2010 1422		

Analyte	Result (ug/L)	Qualifier	MDL	RL
Methylene Chloride	1.0	U	0.19	1.0
Acetone	10	U	2.5	10
Trichloroethene	1.0	U	0.18	1.0
Benzene	1.0	U	0.13	1.0
Toluene	1.0	U	0.090	1.0
Ethylbenzene	1.0	U	0.25	1.0
Xylenes, Total	3.0	U	0.43	3.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	110		70 - 122
Bromofluorobenzene	95		69 - 135
Toluene-d8 (Surr)	99		69 - 125

Client: ARCADIS

Job Number: 460-12745-1

Client Sample ID: MW-23I

Lab Sample ID: 460-12745-8
Client Matrix: Water

Date Sampled: 04/29/2010 1455
Date Received: 04/30/2010 1015

8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 460-36844	Instrument ID: VOAMS3
Preparation:	5030B		Lab File ID: c48142.d
Dilution:	1.0		Initial Weight/Volume: 5 mL
Date Analyzed:	05/07/2010 1236		Final Weight/Volume: 5 mL
Date Prepared:	05/07/2010 1236		

Analyte	Result (ug/L)	Qualifier	MDL	RL
Methylene Chloride	8.4		0.19	1.0
Acetone	10	U	2.5	10
Trichloroethene	1.0	U	0.18	1.0
Benzene	1.0	U	0.13	1.0
Toluene	1.0	U	0.090	1.0
Ethylbenzene	1.0	U	0.25	1.0
Xylenes, Total	3.0	U	0.43	3.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	104		70 - 122
Bromofluorobenzene	101		69 - 135
Toluene-d8 (Surr)	102		69 - 125

Client: ARCADIS

Job Number: 460-12745-1

Client Sample ID: TB-042910

Lab Sample ID: 460-12745-9TB
Client Matrix: Water

Date Sampled: 04/29/2010 0000
Date Received: 04/30/2010 1015

8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 460-36573	Instrument ID: VOAMS3
Preparation:	5030B		Lab File ID: c48053.d
Dilution:	1.0		Initial Weight/Volume: 5 mL
Date Analyzed:	05/05/2010 1133		Final Weight/Volume: 5 mL
Date Prepared:	05/05/2010 1133		

Analyte	Result (ug/L)	Qualifier	MDL	RL
Methylene Chloride	1.0	U	0.19	1.0
Acetone	10	U	2.5	10
Trichloroethene	1.0	U	0.18	1.0
Benzene	1.0	U	0.13	1.0
Toluene	1.0	U	0.090	1.0
Ethylbenzene	1.0	U	0.25	1.0
Xylenes, Total	3.0	U	0.43	3.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	113		70 - 122
Bromofluorobenzene	95		69 - 135
Toluene-d8 (Surr)	101		69 - 125

Client: ARCADIS

Job Number: 460-12745-1

Client Sample ID: **MW-19**

Lab Sample ID: 460-12745-1
Client Matrix: Water

Date Sampled: 04/29/2010 1030
Date Received: 04/30/2010 1015

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch: 460-36766		Instrument ID:	BNAMS11
Preparation:	3510C	Prep Batch: 460-36566		Lab File ID:	z10086.d
Dilution:	1.0			Initial Weight/Volume:	1000 mL
Date Analyzed:	05/06/2010 1616			Final Weight/Volume:	2 mL
Date Prepared:	05/05/2010 0840			Injection Volume:	

Analyte	Result (ug/L)	Qualifier	MDL	RL
Aniline	5.0	U	1.7	5.0
n,n'-Dimethylaniline	1.0	U	0.27	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl	76		61 - 112
2-Fluorophenol	63		14 - 68
Nitrobenzene-d5	88		61 - 120
Phenol-d5	57	X	9 - 48
Terphenyl-d14	89		41 - 124
2,4,6-Tribromophenol	80		50 - 119

Client: ARCADIS

Job Number: 460-12745-1

Client Sample ID: **PZ-4S**

Lab Sample ID: 460-12745-2
Client Matrix: Water

Date Sampled: 04/29/2010 1200
Date Received: 04/30/2010 1015

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch: 460-36875		Instrument ID:	BNAMS11
Preparation:	3510C	Prep Batch: 460-36566		Lab File ID:	z10102.d
Dilution:	1.0			Initial Weight/Volume:	1000 mL
Date Analyzed:	05/06/2010 2255			Final Weight/Volume:	2 mL
Date Prepared:	05/05/2010 0840			Injection Volume:	

Analyte	Result (ug/L)	Qualifier	MDL	RL
Aniline	5.0	U	1.7	5.0
n,n'-Dimethylaniline	1.0	U	0.27	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl	84		61 - 112
2-Fluorophenol	32		14 - 68
Nitrobenzene-d5	87		61 - 120
Phenol-d5	23		9 - 48
Terphenyl-d14	85		41 - 124
2,4,6-Tribromophenol	73		50 - 119

Client: ARCADIS

Job Number: 460-12745-1

Client Sample ID: PZ-4D

Lab Sample ID: 460-12745-3
Client Matrix: Water

Date Sampled: 04/29/2010 1315
Date Received: 04/30/2010 1015

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch: 460-36875		Instrument ID:	BNAMS11
Preparation:	3510C	Prep Batch: 460-36566		Lab File ID:	z10103.d
Dilution:	1.0			Initial Weight/Volume:	1000 mL
Date Analyzed:	05/06/2010 2319			Final Weight/Volume:	2 mL
Date Prepared:	05/05/2010 0840			Injection Volume:	

Analyte	Result (ug/L)	Qualifier	MDL	RL
Aniline	5.0	U	1.7	5.0
n,n'-Dimethylaniline	1.0	U	0.27	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl	91		61 - 112
2-Fluorophenol	34		14 - 68
Nitrobenzene-d5	91		61 - 120
Phenol-d5	20		9 - 48
Terphenyl-d14	88		41 - 124
2,4,6-Tribromophenol	78		50 - 119

Client: ARCADIS

Job Number: 460-12745-1

Client Sample ID: **MW-18**

Lab Sample ID: 460-12745-4
Client Matrix: Water

Date Sampled: 04/29/2010 1530
Date Received: 04/30/2010 1015

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch: 460-36875		Instrument ID:	BNAMS11
Preparation:	3510C	Prep Batch: 460-36566		Lab File ID:	z10104.d
Dilution:	1.0			Initial Weight/Volume:	1000 mL
Date Analyzed:	05/06/2010 2344			Final Weight/Volume:	2 mL
Date Prepared:	05/05/2010 0840			Injection Volume:	

Analyte	Result (ug/L)	Qualifier	MDL	RL
Aniline	5.0	U	1.7	5.0
n,n'-Dimethylaniline	1.0	U	0.27	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl	76		61 - 112
2-Fluorophenol	56		14 - 68
Nitrobenzene-d5	85		61 - 120
Phenol-d5	47		9 - 48
Terphenyl-d14	81		41 - 124
2,4,6-Tribromophenol	72		50 - 119

Client: ARCADIS

Job Number: 460-12745-1

Client Sample ID: MW-23S

Lab Sample ID: 460-12745-5
Client Matrix: Water

Date Sampled: 04/29/2010 1555
Date Received: 04/30/2010 1015

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch: 460-36875		Instrument ID:	BNAMS11
Preparation:	3510C	Prep Batch: 460-36566		Lab File ID:	z10105.d
Dilution:	1.0			Initial Weight/Volume:	1000 mL
Date Analyzed:	05/07/2010 0009			Final Weight/Volume:	2 mL
Date Prepared:	05/05/2010 0840			Injection Volume:	

Analyte	Result (ug/L)	Qualifier	MDL	RL
Aniline	5.0	U	1.7	5.0
n,n'-Dimethylaniline	1.0	U	0.27	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluoroblphenyl	87		61 - 112
2-Fluorophenol	31		14 - 68
Nitrobenzene-d5	85		61 - 120
Phenol-d5	18		9 - 48
Terphenyl-d14	87		41 - 124
2,4,6-Tribromophenol	78		50 - 119

Client: ARCADIS

Job Number: 460-12745-1

Client Sample ID: **MW-25D**

Lab Sample ID: 460-12745-6
Client Matrix: Water

Date Sampled: 04/29/2010 1120
Date Received: 04/30/2010 1015

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch: 460-36875	Instrument ID:	BNAMS11
Preparation:	3510C	Prep Batch: 460-36566	Lab File ID:	z10106.d
Dilution:	1.0		Initial Weight/Volume:	1000 mL
Date Analyzed:	05/07/2010 0034		Final Weight/Volume:	2 mL
Date Prepared:	05/05/2010 0840		Injection Volume:	

Analyte	Result (ug/L)	Qualifier	MDL	RL
Aniline	5.0	U	1.7	5.0
n,n'-Dimethylaniline	1.0	U	0.27	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl	84		61 - 112
2-Fluorophenol	34		14 - 68
Nitrobenzene-d5	87		61 - 120
Phenol-d5	20		9 - 48
Terphenyl-d14	91		41 - 124
2,4,6-Tribromophenol	75		50 - 119

Client: ARCADIS

Job Number: 460-12745-1

Client Sample ID: MW-25S

Lab Sample ID: 460-12745-7
Client Matrix: Water

Date Sampled: 04/29/2010 1240
Date Received: 04/30/2010 1015

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch: 460-36875		Instrument ID:	BNAMS11
Preparation:	3510C	Prep Batch: 460-36566		Lab File ID:	z10107.d
Dilution:	1.0			Initial Weight/Volume:	1000 mL
Date Analyzed:	05/07/2010 0058			Final Weight/Volume:	2 mL
Date Prepared:	05/05/2010 0840			Injection Volume:	

Analyte	Result (ug/L)	Qualifier	MDL	RL
Aniline	5.0	U	1.7	5.0
n,n'-Dimethylaniline	1.0	U	0.27	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl	92		61 - 112
2-Fluorophenol	37		14 - 68
Nitrobenzene-d5	93		61 - 120
Phenol-d5	22		9 - 48
Terphenyl-d14	98		41 - 124
2,4,6-Tribromophenol	78		50 - 119

Client: ARCADIS

Job Number: 460-12745-1

Client Sample ID: MW-23I

Lab Sample ID: 460-12745-8
Client Matrix: Water

Date Sampled: 04/29/2010 1455
Date Received: 04/30/2010 1015

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch: 460-36875		Instrument ID:	BNAMS11
Preparation:	3510C	Prep Batch: 460-36566		Lab File ID:	z10108.d
Dilution:	1.0			Initial Weight/Volume:	1000 mL
Date Analyzed:	05/07/2010 0123			Final Weight/Volume:	2 mL
Date Prepared:	05/05/2010 0840			Injection Volume:	

Analyte	Result (ug/L)	Qualifier	MDL	RL
Aniline	5.0	U	1.7	5.0
n,n'-Dimethylaniline	1.0	U	0.27	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl	85		61 - 112
2-Fluorophenol	47		14 - 68
Nitrobenzene-d5	91		61 - 120
Phenol-d5	34		9 - 48
Terphenyl-d14	83		41 - 124
2,4,6-Tribromophenol	84		50 - 119

Client: ARCADIS

Job Number: 460-12745-1

Client Sample ID: **MW-19**

Lab Sample ID: 460-12745-1
Client Matrix: Water

Date Sampled: 04/29/2010 1030
Date Received: 04/30/2010 1015

8015B Nonhalogenated Organic Compounds - Direct Injection (GC)

Method:	8015B	Analysis Batch: 460-36636	Instrument ID: BNAGC5
Preparation:	N/A		Initial Weight/Volume: 1 uL
Dilution:	1.0		Final Weight/Volume: 10 mL
Date Analyzed:	05/04/2010 0110		Injection Volume: 1 uL
Date Prepared:			Result Type: PRIMARY

Analyte	Result (ug/L)	Qualifier	RL	RL
Methanol	500	U	500	500

Surrogate	%Rec	Qualifier	Acceptance Limits
1-Pentanol	133	X	52 - 122

Client: ARCADIS

Job Number: 460-12745-1

Client Sample ID: PZ-4S

Lab Sample ID: 460-12745-2
Client Matrix: Water

Date Sampled: 04/29/2010 1200
Date Received: 04/30/2010 1015

8015B Nonhalogenated Organic Compounds - Direct Injection (GC)

Method:	8015B	Analysis Batch: 460-36651	Instrument ID: BNAGC5
Preparation:	N/A		Initial Weight/Volume: 1 uL
Dilution:	1.0		Final Weight/Volume: 10 mL
Date Analyzed:	05/05/2010 1914		Injection Volume: 1 uL
Date Prepared:			Result Type: PRIMARY

Analyte	Result (ug/L)	Qualifier	RL	RL
Methanol	500	U	500	500

Surrogate	%Rec	Qualifier	Acceptance Limits
1-Pentanol	103		52 - 122

Client: ARCADIS

Job Number: 460-12745-1

Client Sample ID: PZ-4D

Lab Sample ID: 460-12745-3
Client Matrix: Water

Date Sampled: 04/29/2010 1315
Date Received: 04/30/2010 1015

8015B Nonhalogenated Organic Compounds - Direct Injection (GC)

Method:	8015B	Analysis Batch: 460-36636	Instrument ID: BNAGC5
Preparation:	N/A		Initial Weight/Volume: 1 uL
Dilution:	1.0		Final Weight/Volume: 10 mL
Date Analyzed:	05/04/2010 0116		Injection Volume: 1 uL
Date Prepared:			Result Type: PRIMARY

Analyte	Result (ug/L)	Qualifier	RL	RL
Methanol	500	U	500	500

Surrogate	%Rec	Qualifier	Acceptance Limits
1-Pentanol	93		52 - 122

Client: ARCADIS

Job Number: 460-12745-1

Client Sample ID: **MW-18**

Lab Sample ID: 460-12745-4
Client Matrix: Water

Date Sampled: 04/29/2010 1530
Date Received: 04/30/2010 1015

8015B Nonhalogenated Organic Compounds - Direct Injection (GC)

Method:	8015B	Analysis Batch: 460-36651	Instrument ID: BNAGC5
Preparation:	N/A		Initial Weight/Volume: 1 uL
Dilution:	1.0		Final Weight/Volume: 10 mL
Date Analyzed:	05/05/2010 1920		Injection Volume: 1 uL
Date Prepared:			Result Type: PRIMARY

Analyte	Result (ug/L)	Qualifier	RL	RL
Methanol	500	U	500	500

Surrogate	%Rec	Qualifier	Acceptance Limits
1-Pentanol	93		52 - 122

Client: ARCADIS

Job Number: 460-12745-1

Client Sample ID: MW-23S

Lab Sample ID: 460-12745-5
Client Matrix: Water

Date Sampled: 04/29/2010 1555
Date Received: 04/30/2010 1015

8015B Nonhalogenated Organic Compounds - Direct Injection (GC)

Method:	8015B	Analysis Batch: 460-36636	Instrument ID: BNAGC5
Preparation:	N/A		Initial Weight/Volume: 1 uL
Dilution:	1.0		Final Weight/Volume: 10 mL
Date Analyzed:	05/04/2010 0123		Injection Volume: 1 uL
Date Prepared:			Result Type: PRIMARY

Analyte	Result (ug/L)	Qualifier	RL	RL
Methanol	500	U	500	500

Surrogate	%Rec	Qualifier	Acceptance Limits
1-Pentanol	104		52 - 122

Client: ARCADIS

Job Number: 460-12745-1

Client Sample ID: MW-25D

Lab Sample ID: 460-12745-6
Client Matrix: Water

Date Sampled: 04/29/2010 1120
Date Received: 04/30/2010 1015

8015B Nonhalogenated Organic Compounds - Direct Injection (GC)

Method:	8015B	Analysis Batch: 460-36636	Instrument ID: BNAGC5
Preparation:	N/A		Initial Weight/Volume: 1 uL
Dilution:	1.0		Final Weight/Volume: 10 mL
Date Analyzed:	05/04/2010 0129		Injection Volume: 1 uL
Date Prepared:			Result Type: PRIMARY

Analyte	Result (ug/L)	Qualifier	RL	RL
Methanol	500	U	500	500

Surrogate	%Rec	Qualifier	Acceptance Limits
1-Pentanol	79		52 - 122

Client: ARCADIS

Job Number: 460-12745-1

Client Sample ID: **MW-25S**

Lab Sample ID: 460-12745-7
Client Matrix: Water

Date Sampled: 04/29/2010 1240
Date Received: 04/30/2010 1015

8015B Nonhalogenated Organic Compounds - Direct Injection (GC)

Method:	8015B	Analysis Batch: 460-36636	Instrument ID: BNAGC5
Preparation:	N/A		Initial Weight/Volume: 1 uL
Dilution:	1.0		Final Weight/Volume: 10 mL
Date Analyzed:	05/04/2010 0135		Injection Volume: 1 uL
Date Prepared:			Result Type: PRIMARY

Analyte	Result (ug/L)	Qualifier	RL	RL
Methanol	500	U	500	500

Surrogate	%Rec	Qualifier	Acceptance Limits
1-Pentanol	111		52 - 122

Client: ARCADIS

Job Number: 460-12745-1

Client Sample ID: **MW-23I**

Lab Sample ID: 460-12745-8
Client Matrix: Water

Date Sampled: 04/29/2010 1455
Date Received: 04/30/2010 1015

8015B Nonhalogenated Organic Compounds - Direct Injection (GC)

Method:	8015B	Analysis Batch: 460-36651	Instrument ID: BNAGC5
Preparation:	N/A		Initial Weight/Volume: 1 uL
Dilution:	1.0		Final Weight/Volume: 10 mL
Date Analyzed:	05/05/2010 1926		Injection Volume: 1 uL
Date Prepared:			Result Type: PRIMARY

Analyte	Result (ug/L)	Qualifier	RL	RL
Methanol	500	U	500	500

Surrogate	%Rec	Qualifier	Acceptance Limits
1-Pentanol	107		52 - 122

Chain of Custody Record

Temperature on Receipt _____

Drinking Water? Yes ☐ No ☒

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

12745

05/13/2010

TAL-4124 (1007)

Client	Project Manager	Date	Chain of Custody Number
ARCADIS	DAWN PENNIMEN	4/29/10	125702
Address	**Telephone Number (Area Code)/Fax Number**	**Lab Number**	**Page 1 of 1**
6723 TOWPATH ROAD	315-446-9120		
City / **State** / **Zip Code**	**Site Contact**	**Lab Contact**	
SYRACUSE / NY / 13214	NATHAN SMITH	GRACE CHANG	
Project Name and Location (State)	**Carrier/Waybill Number**		
MCKESSON - BEAR ST, SYRACUSE, NY			
Contract/Purchase Order/Quote No.			
60026003.0000.00010			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Analysis: 8270C	8260B	6010B	Special Instructions/ Conditions of Receipt
MW-19	4/29/10	1030		X			5			3			X	X	X	1
PZ-4S	4/29/10	1200		X			5			3			X	X	X	2
PZ-4D	4/29/10	1315		X			5			3			X	X	X	3
MW-18	4/29/10	1530		X			5			3			X	X	X	4
MW-23S	4/29/10	1565		X			5			3			X	X	X	5
MW-25D	4/29/10	1120		X			5			3			X	X	X	6
MW-26S	4/29/10	1240		X			5			3			X	X	X	7
MW-23I	4/29/10	1455		X			5			3			X	X	X	8
TB-042910	4/29/10	—		X						3				X		9

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Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown

Sample Disposal
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months
(A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required
☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☒ Other STANDARD

QC Requirements (Specify)

	Date	Time		Date	Time
1. Relinquished By: Nathan Smith	4/29/10	1717	1. Received By:	4/29/10	1717
2. Relinquished By:	4/29/10	1900	2. Received By: FedEx →		
3. Relinquished By: FedEx →	4/30/10	10:15	3. Received By:		

Comments

5.3 / 2.0 / 3.6 °C

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

ARCADIS

Infrastructure, environment, facilities

Imagine the result

McKesson Bear Street

Data Usability Summary Report

SYRACUSE, NEW YORK

Volatile, Semivolatile and Methanol Analyses

SDG #460-12764

Analyses Performed By:
TestAmerica Laboratories
Edison New Jersey

Report #12217R
Project: B0026003.0000.00010

SUMMARY

This data quality assessment summarizes the review of Sample Delivery Group (SDG) #460-12764 for samples collected in association with the McKesson Bear Street Site. Included with this assessment are the corrected sample results, sample compliance report, and chain of custody. Analyses were performed on the following samples:

Sample ID	Lab ID	Matrix	Sample Collection Date	Parent Sample	Analysis				
					VOC	SVOC	PCB	MET	MISC
MW-34	460-12764-1	Water	4/30/2010		X	X			X
TW-02RR	460-12764-2	Water	4/30/2010		X	X			X
MW-35	460-12764-3	Water	4/30/2010		X	X			X
MW-36	460-12764-4	Water	4/30/2010		X	X			X
TB-043010	460-12764-5	Water	4/30/2010		X				
DUP-02	460-12764-6	Water	4/30/2010	TW-02RR	X	X			X

ANALYTICAL DATA PACKAGE DOCUMENTATION

The table below is the evaluation of the data package completeness.

Items Reviewed	Reported		Performance Acceptable		Not Required
	No	Yes	No	Yes	
1. Sample receipt condition		X		X	
2. Requested analyses and sample results		X		X	
3. Master tracking list		X		X	
4. Methods of analysis		X		X	
5. Reporting limits		X		X	
6. Sample collection date		X		X	
7. Laboratory sample received date		X		X	
8. Sample preservation verification (as applicable)		X		X	
9. Sample preparation/extraction/analysis dates		X		X	
10. Fully executed Chain-of-Custody (COC) form		X		X	
11. Narrative summary of QA or sample problems provided		X		X	
12. Data Package Completeness and Compliance		X		X	

QA - Quality Assurance

ORGANIC ANALYSIS INTRODUCTION

Analyses were performed according to United States Environmental Protection Agency (USEPA) SW-846 Method 8260B, 8270C, 8015B as referenced in NYSDEC ASP. Data were reviewed in accordance with USEPA National Functional Guidelines of October 1999/January 2005.

The data review process is an evaluation of data on a technical basis rather than a determination of contract compliance. As such, the standards against which the data are being weighed may differ from those specified in the analytical method. It is assumed that the data package represents the best efforts of the laboratory and had already been subjected to adequate and sufficient quality review prior to submission.

During the review process, laboratory qualified and unqualified data are verified against the supporting documentation. Based on this evaluation, qualifier codes may be added, deleted, or modified by the data reviewer. Results are qualified with the following codes in accordance with USEPA National Functional Guidelines:

- Concentration (C) Qualifiers

  U The compound was analyzed for but not detected. The associated value is the compound quantitation limit.

  B The compound has been found in the sample as well as its associated blank, its presence in the sample may be suspect.

- Quantitation (Q) Qualifiers

  E The compound was quantitated above the calibration range.

  D Concentration is based on a diluted sample analysis.

- Validation Qualifiers

  J The compound was positively identified; however, the associated numerical value is an estimated concentration only.

  UJ The compound was not detected above the reported sample quantitation limit. However, the reported limit is approximate and may or may not represent the actual limit of quantitation.

  JN The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification. The associated numerical value is an estimated concentration only.

  UB Compound considered non-detect at the listed value due to associated blank contamination.

  N The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification.

  R The sample results are rejected.

Two facts should be noted by all data users. First, the "R" flag means that the associated value is unusable. In other words, due to significant quality control (QC) problems, the analysis is invalid and provides no information as to whether the compound is present or not. "R" values should not appear on data tables because they cannot be relied upon, even as a last resort. The second fact to keep in mind is that no compound concentration, even if it has passed all QC tests, is guaranteed to be accurate. Strict QC serves to increase confidence in data but any value potentially contains error.

VOLATILE ORGANIC COMPOUND (VOC) ANALYSES

1. Holding Times

The specified holding times for the following methods are presented in the following table.

Method	Matrix	Holding Time	Preservation
SW-846 8260B	Water	14 days from collection to analysis	Cooled @ 4 °C; preserved to a pH of less than 2 s.u.
	Soil	48 hours from collection to extraction and 14 days from extraction to analysis	Cooled @ 4 °C.

s.u. Standard units

All samples were analyzed within the specified holding time criteria.

2. Blank Contamination

Quality assurance (QA) blanks (i.e., method and rinse blanks) are prepared to identify any contamination which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Rinse blanks measure contamination of samples during field operations.

A blank action level (BAL) of five times the concentration of a detected compound in an associated blank (common laboratory contaminant compounds are calculated at ten times) is calculated for QA blanks containing concentrations greater than the method detection limit (MDL). The BAL is compared to the associated sample results to determine the appropriate qualification of the sample results, if needed.

Compounds were not detected above the MDL in the associated blanks; therefore detected sample results were not associated with blank contamination.

3. Mass Spectrometer Tuning

Mass spectrometer performance was acceptable and all analyses were performed within a 12-hour tune clock.

System performance and column resolution were acceptable.

4. Calibration

Satisfactory instrument calibration is established to insure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of acceptable performance at the beginning of an experimental sequence. The continuing calibration verifies that the instrument daily performance is satisfactory.

4.1 Initial Calibration

The method specifies percent relative standard deviation (%RSD) and relative response factor (RRF) limits for select compounds only. A technical review of the data applies limits to all compounds with no exceptions.

All target compounds associated with the initial calibration standards must exhibit a %RSD less than the control limit (15%) or a correlation coefficient greater than 0.99 and an RRF value greater than control limit (0.05).

4.2 Continuing Calibration

All target compounds associated with the continuing calibration standard must exhibit a percent difference (%D) less than the control limit (20%) and RRF value greater than control limit (0.05).

All target compounds associated with the continuing calibration standard must exhibit a percent difference (%D) less than the control limit (20%) and RRF value greater than control limit (0.05).

All compounds associated with the calibrations were within the specified control limits, with the exception of the compounds presented in the following table.

Sample Locations	Initial/Continuing	Compound	Criteria
TW-02RR TB-043010 DUP-02 MW-34 MW-35 MW-36	CCV %D	Acetone	-24.8%

The criteria used to evaluate the initial and continuing calibration are presented in the following table. In the case of a calibration deviation, the sample results are qualified.

Initial/Continuing	Criteria	Sample Result	Qualification
Initial and Continuing Calibration	RRF <0.05	Non-detect	R
		Detect	J
	RRF <0.01[1]	Non-detect	R
		Detect	J
	RRF >0.05 or RRF >0.01[1]	Non-detect	No Action
		Detect	
Initial Calibration	%RSD > 15% or a correlation coefficient <0.99	Non-detect	UJ
		Detect	J
Continuing Calibration	%D >20% (increase in sensitivity)	Non-detect	No Action
		Detect	J
	%D >20% (decrease in sensitivity)	Non-detect	UJ
		Detect	J

[1] RRF of 0.01 only applies to compounds which are typically poor responding compounds (i.e., ketones, 1,4-dioxane, etc.)

5. Surrogates/System Monitoring Compounds

All samples to be analyzed for organic compounds are spiked with surrogate compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique. VOC

analysis requires that all surrogates associated with the analysis exhibit recoveries within the laboratory-established acceptance limits.

All surrogate recoveries were within control limits.

6. Internal Standard Performance

Internal standard performance criteria insure that the GC/MS sensitivity and response are stable during every sample analysis. The criteria requires the internal standard compounds associated with the VOC exhibit area counts that are not greater than two times (+100%) or less than one-half (-50%) of the area counts of the associated continuing calibration standard.

All internal standard responses were within control limits.

7. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Analysis

MS/MSD data are used to assess the precision and accuracy of the analytical method. The compounds used to perform the MS/MSD analysis must exhibit a percent recovery within the laboratory-established acceptance limits. The relative percent difference (RPD) between the MS/MSD recoveries must exhibit an RPD within the laboratory-established acceptance limits.

Note: The MS/MSD recovery control limits do not apply for MS/MSD performed on sample locations where the compound concentration detected in the parent sample exceeds the MS/MSD concentration by a factor of four or greater.

The MS/MSD exhibited acceptable recoveries and RPD between recoveries.

8. Laboratory Control Sample (LCS) Analysis

The LCS analysis is used to assess the precision and accuracy of the analytical method independent of matrix interferences. The compounds associated with the LCS analysis must exhibit a percent recovery within the laboratory-established acceptance limits.

All compounds associated with the LCS analysis exhibited recoveries within the control limits.

9. Field Duplicate Analysis

Field duplicate analysis is used to assess the precision and accuracy of the field sampling procedures and analytical method. A control limit of 50% for water matrices and 100% for soil matrices is applied to the RPD between the parent sample and the field duplicate. In the instance when the parent and/or duplicate sample concentrations are less than or equal to 5 times the RL, a control limit of two times the RL is applied for water matrices or three times the RL is applied for soil matrices.

Results for duplicate samples are summarized in the following table.

Sample ID/Duplicate ID	Compound	Sample Result	Duplicate Result	RPD
TW-02RR/DUP-02	Acetone	9.5 J	12	AC
	Benzene	4.1	4.0	AC

Sample ID/Duplicate ID	Compound	Sample Result	Duplicate Result	RPD
TW-02RR/DUP-02	Toluene	0.78 J	0.75 J	AC
	Ethylbenzene	1.2	1.2	AC
	Xylenes, Total	4.2	4.0	AC

AC Acceptable

The calculated RPDs between the parent sample and field duplicate were acceptable.

10. Compound Identification

Compounds are identified on the GC/MS by using the analytes relative retention time and ion spectra.

All identified compounds met the specified criteria.

11. System Performance and Overall Assessment

Overall system performance was acceptable. Other than for those deviations specifically mentioned in this review, the overall data quality is within the guidelines specified in the method.

DATA VALIDATION CHECKLIST FOR VOCs

VOCs: SW-846 8260	Reported		Performance Acceptable		Not Required
	No	Yes	No	Yes	
GAS CHROMATOGRAPHY/MASS SPECTROMETRY (GC/MS)					
Tier II Validation					
Holding times		X		X	
Reporting limits (units)		X		X	
Blanks					
A. Method blanks		X		X	
B. Equipment blanks					X
C. Trip blanks		X		X	
Laboratory Control Sample (LCS)		X		X	
Laboratory Control Sample Duplicate(LCSD)					X
LCS/LCSD Precision (RPD)					X
Matrix Spike (MS)		X		X	
Matrix Spike Duplicate(MSD)		X		X	
MS/MSD Precision (RPD)		X		X	
Field/Lab Duplicate (RPD)		X		X	
Surrogate Spike Recoveries		X		X	
Dilution Factor		X		X	
Moisture Content		X		X	
Tier III Validation					
System performance and column resolution		X		X	
Initial calibration %RSDs		X		X	
Continuing calibration RRFs		X		X	
Continuing calibration %Ds		X	X		
Instrument tune and performance check		X		X	
Ion abundance criteria for each instrument used		X		X	
Internal standard		X		X	
Compound identification and quantitation					
A. Reconstructed ion chromatograms		X		X	
B. Quantitation Reports		X		X	
C. RT of sample compounds within the established RT windows		X		X	
D. Transcription/calculation errors present		X		X	

VOCs: SW-846 8260	Reported		Performance Acceptable		Not Required
	No	Yes	No	Yes	
GAS CHROMATOGRAPHY/MASS SPECTROMETRY (GC/MS)					
E. Reporting limits adjusted to reflect sample dilutions		X		X	

%RSD Relative standard deviation
%R Percent recovery
RPD Relative percent difference
%D Percent difference

SEMI-VOLATILE VOLATILE ORGANIC COMPOUND (SVOC) ANALYSES

1. Holding Times

The specified holding times for the following methods are presented in the following table.

Method	Matrix	Holding Time	Preservation
SW-846 8270C	Water	7 days from collection to extraction and 40 days from extraction to analysis	Cooled @ 4 °C
	Soil	14 days from collection to extraction and 40 days from extraction to analysis	Cooled @ 4 °C

All samples were analyzed within the specified holding time criteria.

2. Blank Contamination

Quality assurance (QA) blanks (i.e., method and rinse blanks) are prepared to identify any contamination which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Rinse blanks measure contamination of samples during field operations.

A blank action level (BAL) of five times the concentration of a detected compound in an associated blank (common laboratory contaminant compounds are calculated at ten times) is calculated for QA blanks containing concentrations greater than the method detection limit (MDL). The BAL is compared to the associated sample results to determine the appropriate qualification of the sample results, if needed.

Compounds were not detected above the MDL in the associated blanks; therefore detected sample results were not associated with blank contamination.

3. Mass Spectrometer Tuning

Mass spectrometer performance was acceptable and all analyses were performed within a 12-hour tune clock.

System performance and column resolution were acceptable.

4. Calibration

Satisfactory instrument calibration is established to insure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of acceptable performance at the beginning of an experimental sequence. The continuing calibration verifies that the instrument daily performance is satisfactory.

4.1 Initial Calibration

The method specifies percent relative standard deviation (%RSD) and relative response factor (RRF) limits for select compounds only. A technical review of the data applies limits to all compounds with no exceptions.

All target compounds associated with the initial calibration standards must exhibit a %RSD less than the control limit (15%) or a correlation coefficient greater than 0.99 and an RRF value greater than control limit (0.05).

4.2 Continuing Calibration

All target compounds associated with the continuing calibration standard must exhibit a percent difference (%D) less than the control limit (20%) and RRF value greater than control limit (0.05).

All compounds associated with the calibrations were within the specified control limits.

5. Surrogates/System Monitoring Compounds

All samples to be analyzed for organic compounds are spiked with surrogate compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique. SVOC analysis requires that two of the three SVOC surrogate compounds within each fraction exhibit recoveries within the laboratory-established acceptance limits.

Sample locations associated with surrogates exhibiting recoveries outside of the control limits presented in the following table.

Sample Locations	Surrogate	Recovery
TW-02RR DUP-02	Phenol-d5	D
	2-Fluorophenol	
	2,4,6-Tribromophenol	
	Nitrobenzene-d5	
	2-Fluorobiphenyl	
	Terphenyl-d14	

UL Upper limit
AC Acceptable

The criteria used to evaluate the surrogate recoveries are presented in the following table. In the case of a surrogate deviation, the sample results associated with the deviant fraction are qualified as documented in the table below.

Control Limit	Sample Result	Qualification
> UL	Non-detect	No Action
	Detect	J
< LL but > 10%	Non-detect	UJ
	Detect	J
< 10%	Non-detect	R
	Detect	J
Surrogates diluted below the calibration curve due to the high concentration of a target compounds	Non-detect	J[1]
	Detect	

[1] A more concentrated analysis was not performed with surrogate compounds within the calibration range; therefore, no determination of extraction efficiency could be made.

6. Internal Standard Performance

Internal standard performance criteria insure that the GC/MS sensitivity and response are stable during every sample analysis. The criteria requires the internal standard compounds associated with the SVOC exhibit area counts that are not greater than two times (+100%) or less than one-half (-50%) of the area counts of the associated continuing calibration standard.

All internal standard responses were within control limits.

7. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Analysis

MS/MSD data are used to assess the precision and accuracy of the analytical method. The compounds used to perform the MS/MSD analysis must exhibit a percent recovery within the laboratory-established acceptance limits. The relative percent difference (RPD) between the MS/MSD recoveries must exhibit an RPD within the laboratory-established acceptance limits.

Note: The MS/MSD recovery control limits do not apply for MS/MSD performed on sample locations where the compound concentration detected in the parent sample exceeds the MS/MSD concentration by a factor of four or greater.

The MS/MSD exhibited acceptable recoveries and RPD between MS/MSD recoveries.

8. Laboratory Control Sample (LCS) Analysis

The LCS analysis is used to assess the precision and accuracy of the analytical method independent of matrix interferences. The compounds associated with the LCS analysis must exhibit a percent recovery within the laboratory-established acceptance limits.

All compounds associated with the LCS analysis exhibited recoveries within the control limits.

9. Field Duplicate Analysis

Field duplicate analysis is used to assess the precision and accuracy of the field sampling procedures and analytical method. A control limit of 50% for water matrices and 100% for soil matrices is applied to the RPD between the parent sample and the field duplicate. In the instance when the parent and/or duplicate sample concentrations are less than or equal to 5 times the RL, a control limit of two times the RL is applied for water matrices or three times the RL is applied for soil matrices.

Results for duplicate samples are summarized in the following table.

Sample ID/Duplicate ID	Compound	Sample Result	Duplicate Result	RPD
TW-02RR/DUP-02	Aniline	2800	3100	10.2%

AC Acceptable

The calculated RPDs between the parent sample and field duplicate were acceptable.

10. Compound Identification

Compounds are identified on the GC/MS by using the analytes relative retention time and ion spectra.

All identified compounds met the specified criteria.

11. System Performance and Overall Assessment

Overall system performance was acceptable. Other than for those deviations specifically mentioned in this review, the overall data quality is within the guidelines specified in the method.

DATA VALIDATION CHECKLIST FOR SVOCs

SVOCs: SW-846 8270	Reported		Performance Acceptable		Not Required
	No	Yes	No	Yes	
GAS CHROMATOGRAPHY/MASS SPECTROMETRY (GC/MS)					
Tier II Validation					
Holding times		X		X	
Reporting limits (units)		X		X	
Blanks					
D. Method blanks		X		X	
E. Equipment blanks					X
Laboratory Control Sample (LCS) %R		X		X	
Laboratory Control Sample Duplicate(LCSD) %R					X
LCS/LCSD Precision (RPD)					X
Matrix Spike (MS) %R		X		X	
Matrix Spike Duplicate(MSD) %R		X		X	
MS/MSD Precision (RPD)		X		X	
Field/Lab Duplicate (RPD)		X		X	
Surrogate Spike Recoveries		X	X		
Dilution Factor		X		X	
Moisture Content		X		X	
Tier III Validation					
System performance and column resolution		X		X	
Initial calibration %RSDs		X		X	
Continuing calibration RRFs		X		X	
Continuing calibration %Ds		X		X	
Instrument tune and performance check		X		X	
Ion abundance criteria for each instrument used		X		X	
Internal standard		X		X	
Compound identification and quantitation					
F. Reconstructed ion chromatograms		X		X	
G. Quantitation Reports		X		X	
H. RT of sample compounds within the established RT windows		X		X	
I. Transcription/calculation errors present		X		X	
J. Reporting limits adjusted to reflect sample dilutions		X		X	

%RSD Relative standard deviation
%R Percent recovery
RPD Relative percent difference
%D Percent difference

METHANOL (GC/FID) ANALYSES

1. Holding Times

The specified holding times for the following methods are presented in the following table.

Method	Matrix	Holding Time	Preservation
Methanol by SW846 8015B	Water	7 days from collection to analysis	Cooled @ 4 °C

All samples were extracted and analyzed within the specified holding times.

2. Blank Contamination

Quality assurance (QA) blanks (i.e., method and rinse blanks) are prepared to identify any contamination which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Rinse blanks measure contamination of samples during field operations.

A blank action level (BAL) of five times the concentration of a detected compound in an associated blank (common laboratory contaminant compounds are calculated at ten times) is calculated for QA blanks containing concentrations greater than the method detection limit (MDL). The BAL is compared to the associated sample results to determine the appropriate qualification of the sample results, if needed.

Compounds were not detected above the MDL in the associated blanks; therefore detected sample results were not associated with blank contamination.

3. Calibration

Satisfactory instrument calibration is established to insure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of acceptable performance at the beginning of an experimental sequence. The continuing calibration verifies that the instrument daily performance is satisfactory.

All target compounds associated with the initial calibration standards must exhibit a %RSD less than the control limit (15%) or a correlation coefficient greater than 0.99 and an RRF value greater than control limit (0.05).

All target compounds associated with the continuing calibration standard must exhibit a percent difference (%D) less then the control limit (20%) and RRF value greater than control limit (0.05).

All calibration verification standard recoveries were within the control limit.

4. Surrogates/System Monitoring Compounds

All samples to be analyzed for organic compounds are spiked with surrogate compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique. Methanol analysis requires the surrogate compound to exhibit recoveries within the laboratory-established acceptance limits.

All sample locations exhibited acceptable surrogate recoveries.

5. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Analysis

MS/MSD data are used to assess the precision and accuracy of the analytical method. The compounds used to perform the MS/MSD analysis must exhibit a percent recovery within the laboratory established acceptance limits. The relative percent difference (RPD) between the MS/MSD recoveries must exhibit a RPD within the laboratory established acceptance limits.

Note: The MS/MSD recovery control limits do not apply for MS/MSD performed on sample locations were the compounds concentration detected in the parent sample exceeds the MS/MSD concentration by a factor of four or greater.

The MS/MSD exhibited acceptable recoveries and RPD between MS/MSD recoveries.

6. Laboratory Control Sample/Laboratory Control Sample Duplicate (LCS/LCSD) Analysis

The LCS analysis is used to assess the precision and accuracy of the analytical method independent of matrix interferences. The compounds associated with the LCS analysis must exhibit a percent recovery within the laboratory-established acceptance limits. The relative percent difference (RPD) between the LCS/LCSD recoveries must exhibit a RPD within the laboratory established acceptance limits.

All compounds associated with the LCS/LCSD analysis exhibited recoveries and RPD between LCS/LCSD recoveries within the control limits.

7. Field Duplicate Analysis

Field duplicate analysis is used to assess the precision and accuracy of the field sampling procedures and analytical method. A control limit of 50% for water matrices is applied to the RPD between the parent sample and the field duplicate. In the instance when the parent and/or duplicate sample concentrations are less than or equal to 5 times the RL, a control limit of two times the RL is applied for water matrices.

Results for duplicate samples are summarized in the following table.

Sample ID/Duplicate ID	Compound	Sample Result	Duplicate Result	RPD
TW-02RR/DUP-02	Methanol	ND (500)	ND (500)	AC

AC Acceptable

The calculated RPDs between the parent sample and field duplicate were acceptable.

8. System Performance and Overall Assessment

Overall system performance was acceptable. Other than for those deviations specifically mentioned in this review, the overall data quality is within the guidelines specified in the method.

DATA VALIDATION CHECKLIST FOR METHANOL

VOCs; SW-846 8015	Reported		Performance Acceptable		Not Required
	No	Yes	No	Yes	
GAS CHROMATOGRAPHY (GC/FID)					
Tier II Validation					
Holding times		X		X	
Reporting limits (units)		X		X	
Blanks					
A. Method blanks		X		X	
B. Equipment blanks					X
Laboratory Control Sample (LCS)		X		X	
Laboratory Control Sample Duplicate (LCSD)					
LCS/LCSD Precision (RPD)					
Matrix Spike (MS)		X		X	
Matrix Spike Duplicate(MSD)		X		X	
MS/MSD Precision (RPD)		X		X	
Field/Lab Duplicate (%D)		X		X	
Surrogate Spike Recoveries		X		X	
Dilution Factor		X		X	
Moisture Content					X
Tier III Validation					
System performance and column resolution		X		X	
Initial calibration %RSDs		X		X	
Continuing calibration RRFs		X		X	
Continuing calibration %Ds		X		X	
Compound identification and quantitation					
A. Quantitation Reports		X		X	
B. RT of sample compounds within the established RT windows		X		X	
C. Transcription/calculation errors present		X		X	
D. Reporting limits adjusted to reflect sample dilutions		X		X	

%RSD Percent relative difference
%R Percent recovery
RPD Relative percent difference
%D Percent difference

VALIDATION PERFORMED BY: Melissa Hall

SIGNATURE: Melissa Hall

DATE: June 1, 2010

PEER REVIEW: Dennis Capria

DATE: June 11, 2010

Sample Compliance Report

SAMPLE COMPLIANCE REPORT

Sample Delivery Group	Sampling Date	ASP Protocol	Sample ID	Matrix	Compliancy[1]					Non-compliance
					VOC	SVOC	PCB	MET	MISC	
460-12764	4/30/2010	ASP 2005	MW-34	Water	No	Yes	--	--	No	VOC – CCAL
460-12764	4/30/2010	ASP 2005	TW-02RR	Water	No	Yes	--	--	Yes	VOC – CCAL SVOC – Surrogate
460-12764	4/30/2010	ASP 2005	MW-35	Water	No	Yes	--	--	Yes	VOC – CCAL
460-12764	4/30/2010	ASP 2005	MW-36	Water	No	Yes	--	--	Yes	VOC – CCAL
460-12764	4/30/2010	ASP 2005	TB-043010	Water	No	--	--	--	--	VOC – CCAL
460-12764	4/30/2010	ASP 2005	DUP-02	Water	No	Yes	--	--	Yes	VOC – CCAL SVOC - Surrogate

1 Samples which are compliant with no added validation qualifiers are listed as "yes". Samples which are non-compliant or which have added qualifiers are listed as "no". A "no" designation does not necessarily indicate that the data have been rejected or are otherwise unusable.

CHAIN OF CUSTODY/
CORRECTED SAMPLE ANALYSIS DATA SHEETS

Client: ARCADIS

Job Number: 460-12764-1

Client Sample ID: MW-34

Lab Sample ID: 460-12764-1
Client Matrix: Water

Date Sampled: 04/30/2010 1025
Date Received: 05/01/2010 1255

8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 460-36354	Instrument ID: VOAMS13
Preparation:	5030B		Lab File ID: p36212.d
Dilution:	1.0		Initial Weight/Volume: 5 mL
Date Analyzed:	05/03/2010 1417		Final Weight/Volume: 5 mL
Date Prepared:	05/03/2010 1417		

Analyte	Result (ug/L)	Qualifier	MDL	RL
Methylene Chloride	1.0	U	0.19	1.0
Acetone	50	J	2.5	10
Trichloroethene	1.0	U	0.18	1.0
Benzene	0.82	J	0.13	1.0
Toluene	0.42	J	0.090	1.0
Ethylbenzene	1.0	U	0.25	1.0
Xylenes, Total	1.4	J	0.43	3.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	90		70 - 122
Bromofluorobenzene	111		69 - 135
Toluene-d8 (Surr)	93		69 - 125

Client: ARCADIS

Job Number: 460-12764-1

Client Sample ID: TW-02RR

Lab Sample ID: 460-12764-2
Client Matrix: Water

Date Sampled: 04/30/2010 1040
Date Received: 05/01/2010 1255

8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 460-36354		Instrument ID:	VOAMS13
Preparation:	5030B			Lab File ID:	p36202.d
Dilution:	1.0			Initial Weight/Volume:	5 mL
Date Analyzed:	05/03/2010 0955			Final Weight/Volume:	5 mL
Date Prepared:	05/03/2010 0955				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Methylene Chloride	1.0	U	0.19	1.0
Acetone	9.5	J	2.5	10
Trichloroethene	1.0	U	0.18	1.0
Benzene	4.1		0.13	1.0
Toluene	0.78	J	0.090	1.0
Ethylbenzene	1.2		0.25	1.0
Xylenes, Total	4.2		0.43	3.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	87		70 - 122
Bromofluorobenzene	106		69 - 135
Toluene-d8 (Surr)	91		69 - 125

Client: ARCADIS

Job Number: 460-12764-1

Client Sample ID: MW-35

Lab Sample ID: 460-12764-3
Client Matrix: Water

Date Sampled: 04/30/2010 1210
Date Received: 05/01/2010 1255

8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 460-36354	Instrument ID: VOAMS13
Preparation:	5030B		Lab File ID: p36213.d
Dilution:	1.0		Initial Weight/Volume: 5 mL
Date Analyzed:	05/03/2010 1443		Final Weight/Volume: 5 mL
Date Prepared:	05/03/2010 1443		

Analyte	Result (ug/L)	Qualifier	MDL	RL
Methylene Chloride	1.0	U	0.19	1.0
Acetone	10	U J	2.5	10
Trichloroethene	1.0	U	0.18	1.0
Benzene	1.0	U	0.13	1.0
Toluene	1.0	U	0.090	1.0
Ethylbenzene	1.0	U	0.25	1.0
Xylenes, Total	3.0	U	0.43	3.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	86		70 - 122
Bromofluorobenzene	106		69 - 135
Toluene-d8 (Surr)	89		69 - 125

Client: ARCADIS

Job Number: 460-12764-1

Client Sample ID: **MW-36**

Lab Sample ID: 460-12764-4
Client Matrix: Water

Date Sampled: 04/30/2010 1315
Date Received: 05/01/2010 1255

8260B Volatile Organic Compounds (GC/MS)

Method: 8260B
Preparation: 5030B
Dilution: 1.0
Date Analyzed: 05/03/2010 1510
Date Prepared: 05/03/2010 1510

Analysis Batch: 460-36354

Instrument ID: VOAMS13
Lab File ID: p36214.d
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Methylene Chloride	1.0	U	0.19	1.0
Acetone	10	U J	2.5	10
Trichloroethene	1.0	U	0.18	1.0
Benzene	3.3		0.13	1.0
Toluene	1.1		0.090	1.0
Ethylbenzene	0.26	J	0.25	1.0
Xylenes, Total	5.4		0.43	3.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	87		70 - 122
Bromofluorobenzene	109		69 - 135
Toluene-d8 (Surr)	91		69 - 125

Client: ARCADIS

Job Number: 460-12764-1

Client Sample ID: **TB-043010**

Lab Sample ID: 460-12764-5TB
Client Matrix: Water

Date Sampled: 04/30/2010 0000
Date Received: 05/01/2010 1255

8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 460-36354	Instrument ID: VOAMS13
Preparation:	5030B		Lab File ID: p36206.d
Dilution:	1.0		Initial Weight/Volume: 5 mL
Date Analyzed:	05/03/2010 1140		Final Weight/Volume: 5 mL
Date Prepared:	05/03/2010 1140		

Analyte	Result (ug/L)	Qualifier	MDL	RL
Methylene Chloride	1.0	U	0.19	1.0
Acetone	10	U J	2.5	10
Trichloroethene	1.0	U	0.18	1.0
Benzene	1.0	U	0.13	1.0
Toluene	1.0	U	0.090	1.0
Ethylbenzene	1.0	U	0.25	1.0
Xylenes, Total	3.0	U	0.43	3.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	85		70 - 122
Bromofluorobenzene	104		69 - 135
Toluene-d8 (Surr)	90		69 - 125

Client: ARCADIS

Job Number: 460-12764-1

Client Sample ID: DUP-02

Lab Sample ID: 460-12764-6FD
Client Matrix: Water

Date Sampled: 04/30/2010 0000
Date Received: 05/01/2010 1255

8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 460-36354	Instrument ID: VOAMS13
Preparation:	5030B		Lab File ID: p36207.d
Dilution:	1.0		Initial Weight/Volume: 5 mL
Date Analyzed:	05/03/2010 1206		Final Weight/Volume: 5 mL
Date Prepared:	05/03/2010 1206		

Analyte	Result (ug/L)	Qualifier	MDL	RL
Methylene Chloride	1.0	U	0.19	1.0
Acetone	12	J	2.5	10
Trichloroethene	1.0	U	0.18	1.0
Benzene	4.0		0.13	1.0
Toluene	0.75	J	0.090	1.0
Ethylbenzene	1.2		0.25	1.0
Xylenes, Total	4.0		0.43	3.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	86		70 - 122
Bromofluorobenzene	106		69 - 135
Toluene-d8 (Surr)	90		69 - 125

Client: ARCADIS

Job Number: 460-12764-1

Client Sample ID: **MW-34**

Lab Sample ID: 460-12764-1
Client Matrix: Water

Date Sampled: 04/30/2010 1025
Date Received: 05/01/2010 1255

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch: 460-36766	Instrument ID:	BNAMS11
Preparation:	3510C	Prep Batch: 460-36566	Lab File ID:	z10079.d
Dilution:	1.0		Initial Weight/Volume:	1000 mL
Date Analyzed:	05/06/2010 1323		Final Weight/Volume:	2 mL
Date Prepared:	05/05/2010 0840		Injection Volume:	

Analyte	Result (ug/L)	Qualifier	MDL	RL
Aniline	5.0	U	1.7	5.0
n,n'-Dimethylaniline	2.4		0.27	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl	91		61 - 112
2-Fluorophenol	38		14 - 68
Nitrobenzene-d5	94		61 - 120
Phenol-d5	30		9 - 48
Terphenyl-d14	89		41 - 124
2,4,6-Tribromophenol	76		50 - 119

Client: ARCADIS

Job Number: 460-12764-1

Client Sample ID: TW-02RR

Lab Sample ID: 460-12764-2
Client Matrix: Water

Date Sampled: 04/30/2010 1040
Date Received: 05/01/2010 1255

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch: 460-36875	Instrument ID: BNAMS11
Preparation:	3510C	Prep Batch: 460-36566	Lab File ID: z10098.d
Dilution:	20		Initial Weight/Volume: 1000 mL
Date Analyzed:	05/06/2010 2116		Final Weight/Volume: 2 mL
Date Prepared:	05/05/2010 0840		Injection Volume:

Analyte	Result (ug/L)	Qualifier	MDL	RL
Aniline	2800		35	100
n,n'-Dimethylaniline	20	U	5.4	20

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl	0	D	61 - 112
2-Fluorophenol	0	D	14 - 68
Nitrobenzene-d5	0	D	61 - 120
Phenol-d5	0	D	9 - 48
Terphenyl-d14	0	D	41 - 124
2,4,6-Tribromophenol	0	D	50 - 119

Client: ARCADIS

Job Number: 460-12764-1

Client Sample ID: MW-35

Lab Sample ID: 460-12764-3
Client Matrix: Water

Date Sampled: 04/30/2010 1210
Date Received: 05/01/2010 1255

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch: 460-36766	Instrument ID: BNAMS11
Preparation:	3510C	Prep Batch: 460-36566	Lab File ID: z10083.d
Dilution:	1.0		Initial Weight/Volume: 1000 mL
Date Analyzed:	05/06/2010 1502		Final Weight/Volume: 2 mL
Date Prepared:	05/05/2010 0840		Injection Volume:

Analyte	Result (ug/L)	Qualifier	MDL	RL
Aniline	5.0	U	1.7	5.0
n,n'-Dimethylaniline	1.0	U	0.27	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl	82		61 - 112
2-Fluorophenol	37		14 - 68
Nitrobenzene-d5	85		61 - 120
Phenol-d5	22		9 - 48
Terphenyl-d14	87		41 - 124
2,4,6-Tribromophenol	82		50 - 119

Client: ARCADIS

Job Number: 460-12764-1

Client Sample ID: **MW-36**

Lab Sample ID: 460-12764-4
Client Matrix: Water

Date Sampled: 04/30/2010 1315
Date Received: 05/01/2010 1255

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch: 460-36766		Instrument ID:	BNAMS11
Preparation:	3510C	Prep Batch: 460-36566		Lab File ID:	z10084.d
Dilution:	1.0			Initial Weight/Volume:	1000 mL
Date Analyzed:	05/06/2010 1527			Final Weight/Volume:	2 mL
Date Prepared:	05/05/2010 0840			Injection Volume:	

Analyte	Result (ug/L)	Qualifier	MDL	RL
Aniline	77		1.7	5.0
n,n'-Dimethylaniline	2.6		0.27	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl	94		61 - 112
2-Fluorophenol	38		14 - 68
Nitrobenzene-d5	97		61 - 120
Phenol-d5	26		9 - 48
Terphenyl-d14	92		41 - 124
2,4,6-Tribromophenol	71		50 - 119

Client: ARCADIS

Job Number: 460-12764-1

Client Sample ID: DUP-02

Lab Sample ID: 460-12764-6FD

Client Matrix: Water

Date Sampled: 04/30/2010 0000

Date Received: 05/01/2010 1255

8270C Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Method:	8270C	Analysis Batch: 460-36875	Instrument ID:	BNAMS11
Preparation:	3510C	Prep Batch: 460-36566	Lab File ID:	z10101.d
Dilution:	20		Initial Weight/Volume:	1000 mL
Date Analyzed:	05/06/2010 2230		Final Weight/Volume:	2 mL
Date Prepared:	05/05/2010 0840		Injection Volume:	

Analyte	Result (ug/L)	Qualifier	MDL	RL
Aniline	3100	J	35	100
n,n'-Dimethylaniline	20	U J	5.4	20

Surrogate	%Rec	Qualifier	Acceptance Limits
2-Fluorobiphenyl	0	D	61 - 112
2-Fluorophenol	0	D	14 - 68
Nitrobenzene-d5	0	D	61 - 120
Phenol-d5	0	D	9 - 48
Terphenyl-d14	0	D	41 - 124
2,4,6-Tribromophenol	0	D	50 - 119

Client: ARCADIS

Job Number: 460-12764-1

Client Sample ID: **MW-34**

Lab Sample ID: 460-12764-1
Client Matrix: Water

Date Sampled: 04/30/2010 1025
Date Received: 05/01/2010 1255

8015B Nonhalogenated Organic Compounds - Direct Injection (GC)

Method:	8015B	Analysis Batch: 460-36636	Instrument ID: BNAGC5
Preparation:	N/A		Initial Weight/Volume: 1 uL
Dilution:	1.0		Final Weight/Volume: 10 mL
Date Analyzed:	05/04/2010 0141		Injection Volume: 1 uL
Date Prepared:			Result Type: PRIMARY

Analyte	Result (ug/L)	Qualifier	RL	RL
Methanol	500	U	500	500

Surrogate	%Rec	Qualifier	Acceptance Limits
1-Pentanol	96		52 - 122

Client: ARCADIS

Job Number: 460-12764-1

Client Sample ID: TW-02RR

Lab Sample ID: 460-12764-2
Client Matrix: Water

Date Sampled: 04/30/2010 1040
Date Received: 05/01/2010 1255

8015B Nonhalogenated Organic Compounds - Direct Injection (GC)

Method:	8015B	Analysis Batch: 460-36636	Instrument ID: BNAGC5
Preparation:	N/A		Initial Weight/Volume: 1 uL
Dilution:	1.0		Final Weight/Volume: 10 mL
Date Analyzed:	05/04/2010 0147		Injection Volume: 1 uL
Date Prepared:			Result Type: PRIMARY

Analyte	Result (ug/L)	Qualifier	RL	RL
Methanol	500	U	500	500

Surrogate	%Rec	Qualifier	Acceptance Limits
1-Pentanol	93		52 - 122

Client: ARCADIS

Job Number: 460-12764-1

Client Sample ID: **MW-35**

Lab Sample ID: 460-12764-3
Client Matrix: Water

Date Sampled: 04/30/2010 1210
Date Received: 05/01/2010 1255

8015B Nonhalogenated Organic Compounds - Direct Injection (GC)

Method:	8015B	Analysis Batch: 460-36636	Instrument ID: BNAGC5
Preparation:	N/A		Initial Weight/Volume: 1 uL
Dilution:	1.0		Final Weight/Volume: 10 mL
Date Analyzed:	05/04/2010 0206		Injection Volume: 1 uL
Date Prepared:			Result Type: PRIMARY

Analyte	Result (ug/L)	Qualifier	RL	RL
Methanol	500	U	500	500

Surrogate	%Rec	Qualifier	Acceptance Limits
1-Pentanol	84		52 - 122

Client: ARCADIS

Job Number: 460-12764-1

Client Sample ID: MW-36

Lab Sample ID: 460-12764-4
Client Matrix: Water

Date Sampled: 04/30/2010 1315
Date Received: 05/01/2010 1255

8015B Nonhalogenated Organic Compounds - Direct Injection (GC)

Method:	8015B	Analysis Batch: 460-36636	Instrument ID: BNAGC5
Preparation:	N/A		Initial Weight/Volume: 1 uL
Dilution:	1.0		Final Weight/Volume: 10 mL
Date Analyzed:	05/04/2010 0212		Injection Volume: 1 uL
Date Prepared:			Result Type: PRIMARY

Analyte	Result (ug/L)	Qualifier	RL	RL
Methanol	500	U	500	500

Surrogate	%Rec	Qualifier	Acceptance Limits
1-Pentanol	79		52 - 122

Client: ARCADIS

Job Number: 460-12764-1

Client Sample ID: **DUP-02**

Lab Sample ID: 460-12764-6FD
Client Matrix: Water

Date Sampled: 04/30/2010 0000
Date Received: 05/01/2010 1255

8015B Nonhalogenated Organic Compounds - Direct Injection (GC)

Method:	8015B	Analysis Batch: 460-36636	Instrument ID: BNAGC5
Preparation:	N/A		Initial Weight/Volume: 1 uL
Dilution:	1.0		Final Weight/Volume: 10 mL
Date Analyzed:	05/04/2010 0218		Injection Volume: 1 uL
Date Prepared:			Result Type: PRIMARY

Analyte	Result (ug/L)	Qualifier	RL	RL
Methanol	500	U	500	500

Surrogate	%Rec	Qualifier	Acceptance Limits
1-Pentanol	90		52 - 122

Chain of Custody Record

TAL-4124 (1007)

Temperature on Receipt ______

Drinking Water? Yes ☐ No ☒

TestAmerica
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Client	ARCADIS
Project Manager	DAWN PENNIMEN
Date	4/30/10
Chain of Custody Number	125703
Address	6723 TOWPATH ROAD
Telephone Number (Area Code)/Fax Number	315-446-9120
Lab Number	
Page	1 of 1
City	SYRACUSE
State	NY
Zip Code	13214
Site Contact	NATHAN SMITH
Lab Contact	GRACE CHANG
Project Name and Location (State)	MCKESSON - BEAR ST. SYRACUSE NY
Carrier/Waybill Number	
Contract/Purchase Order/Quote No.	B0026003.0000.00010

Analysis (Attach list if more space is needed)

Special Instructions/ Conditions of Receipt: 12764

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Air	Aqueous	Sed.	Soil	Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	8270C	8260B	8015B	MS/MSD	
MW-34	4/30/10	1025		X			5			3			X	X	X		1
TW-02RR	4/30/10	1040		X			15			9			X	X	X	X	2
MW-35	4/30/10	1210		X			5			3			X	X	X		3
MW-36	4/30/10	1315		X			5			3			X	X	X		4
TB-043010	4/30/10	—		X						3				X			5
DUP-02	4/30/10	—		X			5			3			X	X	X		6

Possible Hazard Identification: ☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown

Sample Disposal: ☐ Return To Client ☒ Disposal By Lab ☐ Archive For ______ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required: ☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☒ Other STANDARD

QC Requirements (Specify)

	Date	Time		Date	Time
1. Relinquished By: Nathan P. Smith	4/30/10	1500	1. Received By: R English, Syr	04-30-10	15:00
2. Relinquished By: R English	04-30-10	18:00	2. Received By: FedEx		
3. Relinquished By: C Hall	5/1/10	1255	3. Received By: C Hall		

Comments: 4.4 4.8°C 3.8°C #70.

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

ARCADIS
Infrastructure, environment, facilities

Imagine the result

McKesson Bear Street

Data Usability Summary Report

SYRACUSE, NEW YORK

Volatile Analyses

SDG #460-14485

Analyses Performed By:
TestAmerica Laboratories
Edison New Jersey

Report #12409R
Project: B0026003.0000.00010

SUMMARY

This data quality assessment summarizes the review of Sample Delivery Group (SDG) #460-14485 for samples collected in association with the McKesson Bear Street Site. Included with this assessment are the corrected sample results, sample compliance report, and chain of custody. Analyses were performed on the following samples:

Sample ID	Lab ID	Matrix	Sample Collection Date	Parent Sample	Analysis				
					VOC	SVOC	PCB	MET	MISC
PZ-4S	460-14485-1	Water	6/22/2010		X				
PZ-4D	460-14485-2	Water	6/22/2010		X				
MW-18	460-14485-3	Water	6/22/2010		X				
MW-23I	460-14485-4	Water	6/22/2010		X				
DUP-062210	460-14485-5	Water	6/22/2010	PZ-4S	X				
TB-062210	460-14485-6TB	Water	6/22/2010		X				

ANALYTICAL DATA PACKAGE DOCUMENTATION

The table below is the evaluation of the data package completeness.

Items Reviewed	Reported		Performance Acceptable		Not Required
	No	Yes	No	Yes	
1. Sample receipt condition		X		X	
2. Requested analyses and sample results		X		X	
3. Master tracking list		X		X	
4. Methods of analysis		X		X	
5. Reporting limits		X		X	
6. Sample collection date		X		X	
7. Laboratory sample received date		X		X	
8. Sample preservation verification (as applicable)		X		X	
9. Sample preparation/extraction/analysis dates		X		X	
10. Fully executed Chain-of-Custody (COC) form		X		X	
11. Narrative summary of QA or sample problems provided		X		X	
12. Data Package Completeness and Compliance		X		X	

QA - Quality Assurance

ORGANIC ANALYSIS INTRODUCTION

Analyses were performed according to United States Environmental Protection Agency (USEPA) SW-846 Method 8260B as referenced in NYSDEC ASP. Data were reviewed in accordance with USEPA National Functional Guidelines of October 1999/January 2005.

The data review process is an evaluation of data on a technical basis rather than a determination of contract compliance. As such, the standards against which the data are being weighed may differ from those specified in the analytical method. It is assumed that the data package represents the best efforts of the laboratory and had already been subjected to adequate and sufficient quality review prior to submission.

During the review process, laboratory qualified and unqualified data are verified against the supporting documentation. Based on this evaluation, qualifier codes may be added, deleted, or modified by the data reviewer. Results are qualified with the following codes in accordance with USEPA National Functional Guidelines:

- Concentration (C) Qualifiers

  U The compound was analyzed for but not detected. The associated value is the compound quantitation limit.

  B The compound has been found in the sample as well as its associated blank, its presence in the sample may be suspect.

- Quantitation (Q) Qualifiers

  E The compound was quantitated above the calibration range.

  D Concentration is based on a diluted sample analysis.

- Validation Qualifiers

  J The compound was positively identified; however, the associated numerical value is an estimated concentration only.

  UJ The compound was not detected above the reported sample quantitation limit. However, the reported limit is approximate and may or may not represent the actual limit of quantitation.

  JN The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification. The associated numerical value is an estimated concentration only.

  UB Compound considered non-detect at the listed value due to associated blank contamination.

  N The analysis indicates the presence of a compound for which there is presumptive evidence to make a tentative identification.

  R The sample results are rejected.

Two facts should be noted by all data users. First, the "R" flag means that the associated value is unusable. In other words, due to significant quality control (QC) problems, the analysis is invalid and provides no information as to whether the compound is present or not. "R" values should not appear on data tables because they cannot be relied upon, even as a last resort. The second fact to keep in mind is that no compound concentration, even if it has passed all QC tests, is guaranteed to be accurate. Strict QC serves to increase confidence in data but any value potentially contains error.

VOLATILE ORGANIC COMPOUND (VOC) ANALYSES

1. Holding Times

The specified holding times for the following methods are presented in the following table.

Method	Matrix	Holding Time	Preservation
SW-846 8260B	Water	14 days from collection to analysis	Cooled @ 4 °C; preserved to a pH of less than 2 s.u.
	Soil	48 hours from collection to extraction and 14 days from extraction to analysis	Cooled @ 4 °C.

s.u. Standard units

All samples were analyzed within the specified holding time criteria.

2. Blank Contamination

Quality assurance (QA) blanks (i.e., method and rinse blanks) are prepared to identify any contamination which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Rinse blanks measure contamination of samples during field operations.

A blank action level (BAL) of five times the concentration of a detected compound in an associated blank (common laboratory contaminant compounds are calculated at ten times) is calculated for QA blanks containing concentrations greater than the method detection limit (MDL). The BAL is compared to the associated sample results to determine the appropriate qualification of the sample results, if needed.

Compounds were not detected above the MDL in the associated blanks; therefore detected sample results were not associated with blank contamination.

3. Mass Spectrometer Tuning

Mass spectrometer performance was acceptable and all analyses were performed within a 12-hour tune clock.

System performance and column resolution were acceptable.

4. Calibration

Satisfactory instrument calibration is established to insure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of acceptable performance at the beginning of an experimental sequence. The continuing calibration verifies that the instrument daily performance is satisfactory.

4.1 Initial Calibration

The method specifies percent relative standard deviation (%RSD) and relative response factor (RRF) limits for select compounds only. A technical review of the data applies limits to all compounds with no exceptions.

All target compounds associated with the initial calibration standards must exhibit a %RSD less than the control limit (15%) or a correlation coefficient greater than 0.99 and an RRF value greater than control limit (0.05).

4.2 Continuing Calibration

All target compounds associated with the continuing calibration standard must exhibit a percent difference (%D) less than the control limit (20%) and RRF value greater than control limit (0.05).

All compounds associated with the calibrations were within the specified control limits, with the exception of the compounds presented in the following table.

Sample Locations	Initial/Continuing	Compound	Criteria
MW-18 PZ-4S PZ-4D TB-062210	CCV %D	Acetone	30.1%

The criteria used to evaluate the initial and continuing calibration are presented in the following table. In the case of a calibration deviation, the sample results are qualified.

Initial/Continuing	Criteria	Sample Result	Qualification
Initial and Continuing Calibration	RRF <0.05	Non-detect	R
		Detect	J
	RRF <0.01[1]	Non-detect	R
		Detect	J
	RRF >0.05 or RRF >0.01[1]	Non-detect	No Action
		Detect	
Initial Calibration	%RSD > 15% or a correlation coefficient <0.99	Non-detect	UJ
		Detect	J
Continuing Calibration	%D >20% (increase in sensitivity)	Non-detect	No Action
		Detect	J
	%D >20% (decrease in sensitivity)	Non-detect	UJ
		Detect	J

[1] RRF of 0.01 only applies to compounds which are typically poor responding compounds (i.e., ketones, 1,4-dioxane, etc.)

5. Surrogates/System Monitoring Compounds

All samples to be analyzed for organic compounds are spiked with surrogate compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique. VOC analysis requires that all surrogates associated with the analysis exhibit recoveries within the laboratory-established acceptance limits.

All surrogate recoveries were within control limits.

6. Internal Standard Performance

Internal standard performance criteria insure that the GC/MS sensitivity and response are stable during every sample analysis. The criteria requires the internal standard compounds associated with the VOC exhibit area counts that are not greater than two times (+100%) or less than one-half (-50%) of the area counts of the associated continuing calibration standard.

All internal standard responses were within control limits.

7. Matrix Spike/Matrix Spike Duplicate (MS/MSD) Analysis

MS/MSD data are used to assess the precision and accuracy of the analytical method. The compounds used to perform the MS/MSD analysis must exhibit a percent recovery within the laboratory-established acceptance limits. The relative percent difference (RPD) between the MS/MSD recoveries must exhibit an RPD within the laboratory-established acceptance limits.

Note: The MS/MSD recovery control limits do not apply for MS/MSD performed on sample locations where the compound concentration detected in the parent sample exceeds the MS/MSD concentration by a factor of four or greater.

The MS/MSD exhibited acceptable recoveries. Sample locations associated with MS/MSD recoveries exhibiting an RPD greater than of the control limit presented in the following table.

Sample Locations	Compound
PZ-4S	Acetone

The criteria used to evaluate the RPD between the MS/MSD recoveries are presented in the following table. In the case of an RPD deviation, the sample results are qualified as documented in the table below.

Control Limit	Sample Result	Qualification
> UL	Non-detect	UJ
	Detect	J

8. Laboratory Control Sample (LCS) Analysis

The LCS analysis is used to assess the precision and accuracy of the analytical method independent of matrix interferences. The compounds associated with the LCS analysis must exhibit a percent recovery within the laboratory-established acceptance limits.

All compounds associated with the LCS analysis exhibited recoveries within the control limits.

9. Field Duplicate Analysis

Field duplicate analysis is used to assess the precision and accuracy of the field sampling procedures and analytical method. A control limit of 50% for water matrices and 100% for soil matrices is applied to the RPD between the parent sample and the field duplicate. In the instance when the parent and/or duplicate sample concentrations are less than or equal to 5 times the RL, a control limit of two times the RL is applied for water matrices or three times the RL is applied for soil matrices.

Results for duplicate samples are summarized in the following table.

Sample ID/Duplicate ID	Compound	Sample Result	Duplicate Result	RPD
PZ-4S/DUP-062210	All compounds	ND	ND	AC

AC Acceptable
ND Not detected

The RPDs between the parent sample and field duplicate were acceptable.

10. Compound Identification

Compounds are identified on the GC/MS by using the analytes relative retention time and ion spectra.

No target compounds were identified in the samples.

11. System Performance and Overall Assessment

Overall system performance was acceptable. Other than for those deviations specifically mentioned in this review, the overall data quality is within the guidelines specified in the method.

DATA VALIDATION CHECKLIST FOR VOCs

VOCs: SW-846 8260	Reported		Performance Acceptable		Not Required
	No	Yes	No	Yes	
GAS CHROMATOGRAPHY/MASS SPECTROMETRY (GC/MS)					
Tier II Validation					
Holding times		X		X	
Reporting limits (units)		X		X	
Blanks					
A. Method blanks		X		X	
B. Equipment blanks		X		X	
C. Trip blanks		X		X	
Laboratory Control Sample (LCS)		X		X	
Laboratory Control Sample Duplicate(LCSD)					X
LCS/LCSD Precision (RPD)					X
Matrix Spike (MS)		X		X	
Matrix Spike Duplicate(MSD)		X		X	
MS/MSD Precision (RPD)		X	X		
Field/Lab Duplicate (RPD)		X		X	
Surrogate Spike Recoveries		X		X	
Dilution Factor		X		X	
Moisture Content		X		X	
Tier III Validation					
System performance and column resolution		X		X	
Initial calibration %RSDs		X		X	
Continuing calibration RRFs		X		X	
Continuing calibration %Ds		X	X		
Instrument tune and performance check		X		X	
Ion abundance criteria for each instrument used		X		X	
Internal standard		X		X	
Compound identification and quantitation					
A. Reconstructed ion chromatograms		X		X	
B. Quantitation Reports		X		X	
C. RT of sample compounds within the established RT windows		X		X	
D. Transcription/calculation errors present		X		X	

VOCs: SW-846 8260	Reported		Performance Acceptable		Not Required
	No	Yes	No	Yes	
GAS CHROMATOGRAPHY/MASS SPECTROMETRY (GC/MS)					
E. Reporting limits adjusted to reflect sample dilutions		X		X	

%RSD Relative standard deviation
%R Percent recovery
RPD Relative percent difference
%D Percent difference

VALIDATION PERFORMED BY: Melissa Hall

SIGNATURE: Melissa Hall

DATE: July 13, 2010

PEER REVIEW: Todd Church

DATE: July 26, 2010

Sample Compliance Report

SAMPLE COMPLIANCE REPORT

Sample Delivery Group	Sampling Date	ASP Protocol	Sample ID	Matrix	Compliancy[1]					Non-compliance
					VOC	SVOC	PCB	MET	MISC	
460-14485	6/22/2010	ASP 2005	PZ-4S	Water	No	--	--	--	--	VOC – MS/MSD RPD
460-14485	6/22/2010	ASP 2005	PZ-4D	Water	Yes	--	--	--	--	
460-14485	6/22/2010	ASP 2005	MW-18	Water	Yes	--	--	--	--	
460-14485	6/22/2010	ASP 2005	MW-23I	Water	Yes	--	--	--	--	
460-14485	6/22/2010	ASP 2005	DUP-062210	Water	Yes	--	--	--	--	
460-14485	6/22/2010	ASP 2005	TB-062210	Water	Yes	--	--	--	--	

1 Samples which are compliant with no added validation qualifiers are listed as "yes". Samples which are non-compliant or which have added qualifiers are listed as "no". A "no" designation does not necessarily indicate that the data have been rejected or are otherwise unusable.

CHAIN OF CUSTODY/
CORRECTED SAMPLE ANALYSIS DATA SHEETS

Client: ARCADIS

Job Number: 460-14485-1

Client Sample ID: **PZ-4S**

Lab Sample ID: 460-14485-1
Client Matrix: Water

Date Sampled: 06/22/2010 1110
Date Received: 06/23/2010 1040

8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 460-41258	Instrument ID: VOAMS4
Preparation:	5030B		Lab File ID: d20157.d
Dilution:	1.0		Initial Weight/Volume: 5 mL
Date Analyzed:	06/25/2010 2317		Final Weight/Volume: 5 mL
Date Prepared:	06/25/2010 2317		

Analyte	Result (ug/L)	Qualifier	MDL	RL
Methylene Chloride	1.0	U	0.19	1.0
Acetone	10	U J	2.5	10
Trichloroethene	1.0	U	0.18	1.0
Benzene	1.0	U	0.13	1.0
Toluene	1.0	U	0.090	1.0
Ethylbenzene	1.0	U	0.25	1.0
Xylenes, Total	3.0	U	0.43	3.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	109		70 - 122
Bromofluorobenzene	97		69 - 135
Toluene-d8 (Surr)	99		69 - 125

Client: ARCADIS

Job Number: 460-14485-1

Client Sample ID: PZ-4D

Lab Sample ID: 460-14485-2
Client Matrix: Water

Date Sampled: 06/22/2010 1250
Date Received: 06/23/2010 1040

8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 460-41258	Instrument ID: VOAMS4
Preparation:	5030B		Lab File ID: d20169.d
Dilution:	1.0		Initial Weight/Volume: 5 mL
Date Analyzed:	06/26/2010 0407		Final Weight/Volume: 5 mL
Date Prepared:	06/26/2010 0407		

Analyte	Result (ug/L)	Qualifier	MDL	RL
Methylene Chloride	1.0	U	0.19	1.0
Acetone	10	U	2.5	10
Trichloroethene	1.0	U	0.18	1.0
Benzene	1.0	U	0.13	1.0
Toluene	1.0	U	0.090	1.0
Ethylbenzene	1.0	U	0.25	1.0
Xylenes, Total	3.0	U	0.43	3.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	118		70 - 122
Bromofluorobenzene	97		69 - 135
Toluene-d8 (Surr)	98		69 - 125

Client: ARCADIS

Job Number: 460-14485-1

Client Sample ID: MW-18

Lab Sample ID: 460-14485-3

Client Matrix: Water

Date Sampled: 06/22/2010 1215

Date Received: 06/23/2010 1040

8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 460-41258	Instrument ID: VOAMS4
Preparation:	5030B		Lab File ID: d20170.d
Dilution:	1.0		Initial Weight/Volume: 5 mL
Date Analyzed:	06/26/2010 0431		Final Weight/Volume: 5 mL
Date Prepared:	06/26/2010 0431		

Analyte	Result (ug/L)	Qualifier	MDL	RL
Methylene Chloride	1.0	U	0.19	1.0
Acetone	10	U	2.5	10
Trichloroethene	1.0	U	0.18	1.0
Benzene	1.0	U	0.13	1.0
Toluene	1.0	U	0.090	1.0
Ethylbenzene	1.0	U	0.25	1.0
Xylenes, Total	3.0	U	0.43	3.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	121		70 - 122
Bromofluorobenzene	100		69 - 135
Toluene-d8 (Surr)	98		69 - 125

Client: ARCADIS

Job Number: 460-14485-1

Client Sample ID: MW-23I

Lab Sample ID: 460-14485-4
Client Matrix: Water

Date Sampled: 06/22/2010 1415
Date Received: 06/23/2010 1040

8260B Volatile Organic Compounds (GC/MS)

Method: 8260B
Preparation: 5030B
Dilution: 1.0
Date Analyzed: 06/27/2010 1900
Date Prepared: 06/27/2010 1900

Analysis Batch: 460-41293

Instrument ID: VOAMS4
Lab File ID: d20179.d
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Methylene Chloride	1.0	U	0.19	1.0
Acetone	10	U	2.5	10
Trichloroethene	1.0	U	0.18	1.0
Benzene	1.0	U	0.13	1.0
Toluene	1.0	U	0.090	1.0
Ethylbenzene	1.0	U	0.25	1.0
Xylenes, Total	3.0	U	0.43	3.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	116		70 - 122
Bromofluorobenzene	98		69 - 135
Toluene-d8 (Surr)	96		69 - 125

Client: ARCADIS

Job Number: 460-14485-1

Client Sample ID: Dup-062210

Lab Sample ID: 460-14485-5
Client Matrix: Water

Date Sampled: 06/22/2010 0000
Date Received: 06/23/2010 1040

8260B Volatile Organic Compounds (GC/MS)

Method: 8260B
Preparation: 5030B
Dilution: 1.0
Date Analyzed: 06/27/2010 1925
Date Prepared: 06/27/2010 1925

Analysis Batch: 460-41293

Instrument ID: VOAMS4
Lab File ID: d20180.d
Initial Weight/Volume: 5 mL
Final Weight/Volume: 5 mL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Methylene Chloride	1.0	U	0.19	1.0
Acetone	10	U	2.5	10
Trichloroethene	1.0	U	0.18	1.0
Benzene	1.0	U	0.13	1.0
Toluene	1.0	U	0.090	1.0
Ethylbenzene	1.0	U	0.25	1.0
Xylenes, Total	3.0	U	0.43	3.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	116		70 - 122
Bromofluorobenzene	98		69 - 135
Toluene-d8 (Surr)	96		69 - 125

Client: ARCADIS

Job Number: 460-14485-1

Client Sample ID: **TB-062210**

Lab Sample ID: 460-14485-6TB
Client Matrix: Water

Date Sampled: 06/22/2010 0000
Date Received: 06/23/2010 1040

8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 460-41258	Instrument ID: VOAMS4
Preparation:	5030B		Lab File ID: d20161.d
Dilution:	1.0		Initial Weight/Volume: 5 mL
Date Analyzed:	06/26/2010 0053		Final Weight/Volume: 5 mL
Date Prepared:	06/26/2010 0053		

Analyte	Result (ug/L)	Qualifier	MDL	RL
Methylene Chloride	1.0	U	0.19	1.0
Acetone	10	U	2.5	10
Trichloroethene	1.0	U	0.18	1.0
Benzene	1.0	U	0.13	1.0
Toluene	1.0	U	0.090	1.0
Ethylbenzene	1.0	U	0.25	1.0
Xylenes, Total	3.0	U	0.43	3.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	111		70 - 122
Bromofluorobenzene	97		69 - 135
Toluene-d8 (Surr)	99		69 - 125

Chain of Custody Record

Temperature on Receipt 4° IR 40

Drinking Water? Yes ☐ No ☒

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

14485

07/06/2010

TAL-4124 (1007)

Client	Project Manager	Date	Chain of Custody Number
ARCADIS	DAWN PENNIMAN	6/22/10	126038
Address	**Telephone Number (Area Code)/Fax Number**	**Lab Number**	**Page** 1 of 1
6723 TOWPATH RD.	315-446-9120	EDISON	
City / **State** / **Zip Code**	**Site Contact**	**Lab Contact**	
SYRACUSE / NY / 13214	NATHAN SMITH	GRACE CHANG	
Project Name and Location (State)	**Carrier/Waybill Number**		
MCKESSON BEAM ST. SYRACUSE N.Y.			
Contract/Purchase Order/Quote No.			
B0026003 0000.00010			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	8260B	MS/MSD	Analysis (Attach list if more space is needed)	Special Instructions/ Conditions of Receipt
PZ-45	6/22/10	1110		X						3			X	X	2	MS/MSD
PZ-4D	↓	1250		X						3			X		2	
MW-18		1215		X						3			X		3	
MW-23I		1415		X						3			X		2	
DUP-062210	6/22/10	—		X						3			X		5	
TB-062210	—	—		X						3			X		6	

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Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☒ Unknown

Sample Disposal
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required
☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☒ Other STANDARD

QC Requirements (Specify)

	Date	Time		Date	Time
1. Relinquished By: Nathan Smith	6/22/10	15:17	1. Received By: English, SyR	06-22-10	15:17
2. Relinquished By: English	06-23-10	19:00	2. Received By: Fed Ex		
3. Relinquished By: Fed Ex	6/23/10	1040	3. Received By:	6/23/10	1040

Comments

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy